The effect of the distance between mesh and the urethra on sexual function in patients who underwent transobturator tape

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Abstract

Objective: To evaluate the effect of mesh-urethra distance on sexual function in continent patients who underwent transobturator tape (TOT) surgery due to isolated stress urinary incontinence (SUI).

Material and Methods: Continent patients who had undergone TOT surgery for SUI were eligible. Objective treatment for SUI was defined as the absence of urine leakage during a stress test. Translabial perineal ultrasound was performed six months after surgery. The successful surgical group was split into two subgroups based on the distance from the posterior of the urethra at the bladder neck to the nearest proximal edge of the tape: <5 mm and >5 mm. In addition to these, band percentile, the descent of bladder neck and urethra length measured by perineal ultrasound, pubo-urethral distance, urethral thickness, detrusor thickness, cystocele descent, rectal descent, and uterine descent were evaluated. Preoperative and postoperative results of the standardized and internationally valid incontinence questionnaires Incontinence Questionnaire Urinary Incontinence Short Form and Female Sexual Function Index (FSFI) were compared between groups.

Results: Eighty-two patients were included. The postoperative FSFI scores for the >5 mm group were significantly lower than those of the <5 mm group, including the postoperative FSFI average, all subscales except lubrication, and average change scores due to the operation ($p<0.001$). There was no statistically significant relationship between the percentile occupied and postoperative FSFI score ($p=0.553$), and the FSFI preoperative-postoperative difference was not significant ($p=0.905$).

Conclusion: Sexual functions are more affected in patients with a mesh-urethra distance >5 mm as measured by perineal ultrasound. (J Turk Ger Gynecol Assoc. 2024; 25: 124-31)

Keywords: Transobturator tape, transperineal ultrasound, female stress incontinence, sexualiy

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Introduction

Urinary incontinence is a common pathological condition observed among women. Stress urinary incontinence (SUI), which is responsible for 52-65% of cases of urinary leakage, occurs in women aged 30 to 60 years (1). SUI, which negatively affects women's quality of life, can impact their physical activities and emotional, psychosocial, and even sexual lives. Severe incontinence can lead to decreased libido and vaginal dryness in women (2). This reality affects not only the sexual function of women with SUI but also their relationships with their partners, potentially leading to an overall worse sexual experience and consequently a decrease in quality of life (3).

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Thus, a better understanding of the sexual functions of women with SUI is important (4).

The loss of connective tissue and pelvic floor muscle support leads to inadequate coaptation of the urethra in stress urinary physiopathology, causing incontinence. This loss of support results in urethral hypermobility, leading to downward movement of the bladder neck (5). Evaluating bladder neck mobility is part of an SUI assessment. However, traditional diagnostic methods, including medical history, physical examination, urinary incontinence surveys, urine analysis, and Q-tip tests, have specific limitations (6). Therefore, transperineal ultrasonography has become increasingly common for evaluating the bladder neck, especially proximal urethral mobility. Pelvic floor ultrasound is considered the best imaging technique for assessing the position and condition of mesh placement (7). Furthermore, by creating a hyperechoic image with ultrasound, tapes and materials can be easily visualized, providing good correlation with surgical exploration and facilitating the assessment of postoperative complications. Pelvic floor ultrasound is a useful tool for visualizing slings, assessing urethral mobility, and evaluating post-surgical changes after anti-incontinence surgery (8).

In recent years, mid-urethral sling (MUS) surgery using synthetic meshes that provide the necessary urethral support have emerged as an effective treatment method for SUI. The widespread preference for MUS surgery is due to its minimally invasive nature, high success rate, and relatively low complication rate. Despite these advantages, surgical outcomes after MUS may not always be successful. Perioperative complications, inadequate tension of the mesh, or incorrect mesh placement can lead to treatment failure (9). The aim of the present study was to evaluate the significance of the mesh-urethra distance on sexual function using perineal ultrasound in continent patients who underwent TOT surgery due to isolated SUI.

Material and Methods

Between January 2020 and January 2022, patients aged 18 to 45 years who underwent MUS surgery due to isolated SUI were included in the study. All patients who underwent TOT surgery were included in routine postoperative follow-up, including clinic visits on postoperative day seven and at six months. On the seventh day after surgery, patients underwent postoperative care, stress cough test, and residual urine volume measurement. At the 6-month follow-up, 1-hour pad test and perineal ultrasound, were added to the previously used tests. Objective results were evaluated with cough stress test and 1-hour pad test. SUI treatment was defined as no urine leakage during the cough stress test and a pad weight of less than 2 g during the 1-hour pad test at the follow-up visit. Healing was defined as a decrease of more than 50% in urine weight in the 1-hour pad test and a positive result in the cough stress test. Failure was defined as less than a 50% decrease in the 1-hour pad test and a positive result in the cough stress test. Subjective cure was defined as follows: A woman was urinary continent if her total score on the International Consultation on Incontinence Questionnaire-Urinary Incontinence-short form (ICIQ-UI-SF) was 0 and she answered “never” to “When does urine leak?”. Patients who achieved objective and subjective cures after surgery were identified as urinary continent, and only patients who did not experience postoperative urinary leakage were included in the study.

The study was approved by the University of Health Sciences Turkey, İstanbul Prof. Dr. Cemil Taşcıoğlu City Hospital Local Ethics Committee (approval number: 27, date: 23.01.2023) and registered with the National Clinical Trials Registry under NCT06211894. Written consent was obtained from each participant. The study design was conducted in accordance with the Declaration of Helsinki. Patients who experienced surgical failure in incontinence surgery, who had undergone previous vaginal surgery, who had a history of hysterectomy, who underwent additional surgeries during the same session, who had pelvic organ prolapse, who had received radiation therapy, who had a diagnosis of malignancy, who were menopausal, who received external hormone treatment, who were sexually inactive, whose partners had erectile dysfunction, who did not attend postoperative follow-up appointments, who became postoperatively pregnant, and who had undergone non-synthetic mesh (autologous fascia) surgery for SUI were excluded from the study.

Sexual dysfunction is briefly defined as a persistent or recurrent disorder in sexual desire or response. In this context, women with sexual dysfunction due to hormonal reasons or vasculogenic factors (such as diabetes mellitus, peripheral arterial disease, smoking), neurogenic factors (spinal cord injuries, multiple sclerosis, disc herniation, peripheral neuropathy), myogenic factors, pelvic surgery, medications, and psychogenic factors were also excluded from the study.

All the patients received intravenous antibacterial prophylaxis (cefazolin, 2 g) at the beginning of surgery, while no vaginal preparation was necessary the day before the surgery. Transobturator approach was performed as described by Delorme (10) in 2001 using a curved tunneler inserted from the outside entrance point to adjust the tape without any tension. Prolene light mesh (condensed monofilament non-absorbable polypropylene) was used as mesh material. A piece of polypropylene mesh (1.0-1.2 cm in width 20 cm in length) was cut by the surgeon from condensed monofilament non-absorbable polypropylene (TAHA Prolene Polypropylene mesh, Altaylar Bilim, Turkey). All patients who underwent routine TOT

procedures were operated on by specialized urogynecologists at a single center, and all surgical operations were performed by the same surgical team. Except for cases with complications related to bladder injury, routine cystoscopic examination was not performed. Perioperative and postoperative complication incidence, febrile morbidity, analgesic requirements, and postoperative hospital stay were recorded. The remaining urine volume was evaluated after Foley catheter removal. Difficulty in urinating was defined as a residual urine volume of 150 mL or more, controlled by catheterization after urination.

Preoperative and postoperative 6-month follow-ups included perineal ultrasound using an abdominal probe, often employing a Siemens Acuson X 300 ultrasonography device, to assess the position and functionality of the sling at rest. Patients were examined with a probe placed on the sagittal plane of the labia minora while in a semi-recumbent position, with the bladder filled to 200-300 mL. The methodology followed during the transperineal pelvic floor ultrasound consisted of capturing three volume measurements for each patient: at rest, during the Valsalva maneuver (minimum of 6 seconds) and at maximum contraction. The ultrasound parameters included are described in Figure 1.

Images were acquired in the median sagittal plane, encompassing views of the symphysis pubis, bladder, urethra, vagina, and anal canal. The suburethral sling was identified as a hyperechoic structure, and the sling's position was measured relative to the urethra and symphysis pubis both at rest and during the Valsalva maneuver.

Patients who achieved continence after surgery were split into two subgroups based on the distance from the posterior of the urethra at the bladder neck to the nearest proximal edge of the tape: <5 mm and >5 mm. The position of the sling along the urethra was measured as a percentage of urethral length and is referred to as the sling percentile. This measurement was calculated as follows: the proximal urethral length (distance from the sling's proximal point to the bladder neck) divided by the total urethral length (distance from the bladder neck to the external urethral meatus) in the sagittal plane, where the bladder neck and the external urethral meatus represent 0% and 100% of urethral length, respectively. Additionally, perineal ultrasound was used to evaluate various parameters including bladder descent, pubo-urethral distance, urethral thickness, detrusor thickness, cystocele descent, rectal descent, and uterine descent.

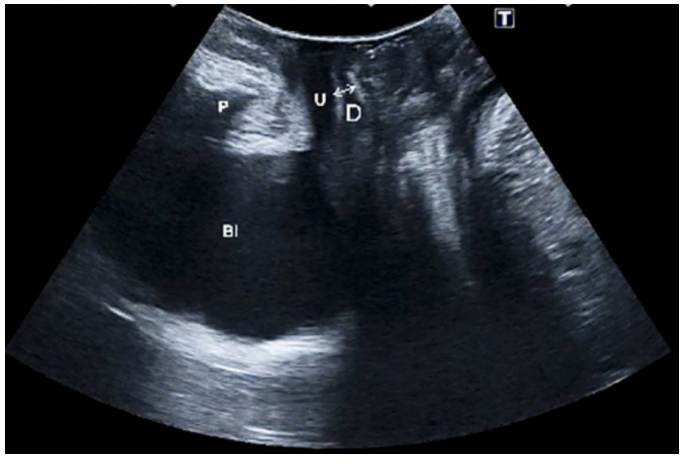

Figure 1. The ultrasound parameters
P: Symphysis pubis, U: Urethra, BL: Bladder, D: Urethra mesh between distance

In addition, questionnaires were administered preoperatively and at the 6-month postoperative follow-up. The FSFI is a Likert-type scale consisting of 19 items that assess sexual dysfunction in women. The Turkish version of the questionnaire was previously validated (11). The scale consists of six separate sections: desire; arousal; lubrication; orgasm; satisfaction; and pain. The overall score of the scale ranges from a minimum of 2 to a maximum of 36, with a higher score indicating better function. A score of 26.55 or below indicated the existence of sexual dysfunction in this study.

The ICIQ-UI SF was used to assess the severity of urinary incontinence at the 6-month follow-up (12). The ICIQ-UI SF score ranges between 0 and 21 and represents the weighted sum of three factors related to urinary incontinence: urinary incontinence frequency ("How often do you experience urine leakage?" rated from 0 = never to 5 = all the time); quantity of leakage ("How much urine do you usually leak?" rated from 0 = none to 6 = a large amount); and interference with daily life (rated from 0 = not at all to 10 = a great deal). Higher scores indicate more severe urinary incontinence. Secondary outcomes included no incontinence (defined as responses indicating "never" or "none" to ICIQ-UI SF frequency or quantity items) and improvement in urinary incontinence (indicated by a reduction in ICIQ-UI SF score of ≥3 points). The Turkish version of the questionnaire was validated (13).

Statistical analysis

SPSS, version 15.0 for Windows was used for statistical analysis (IBM inc., Armonk, NY, USA). Descriptive statistics encompassed the mean, standard deviation, minimum, maximum, and median values for numerical and categorical variables. When numerical variables did not adhere to the normal distribution assumption, independent two-group comparisons were performed using the Mann-Whitney U test. Relationships between numerical and ordinal variables were explored via Spearman's correlation analysis due to the unmet parametric test condition. A significance level of $p<0.05$ was adopted for the alpha.

Results

Eighty-two patients were included in the study and were divided into two groups based on the distance between the mesh and the urethra. There was a significant difference between these two defined groups (p<0.001). There were no differences observed between the two groups in terms of age, gravidity, parity, normal birth, and body mass index. In the perineal ultrasound of all patients in both groups, the preoperative urethral rotation angle was greater than 45°, and the preoperative retrovesical angle was greater than 140°. No differences were observed between the defined groups in terms of sling percentiles. The findings are summarized in Table 1.

There were no significant differences between the two groups in terms of preoperative urethral thickness, descent of the bladder neck, detrusor thickness, cystocele, rectocele, or uterine descent. Preoperative ICIQ-SF scores for questions 3-5 indicated moderate severity, and there was no difference between the two groups. Postoperatively, ICIQ-SF scores improved in both groups, with no differences observed between the groups. The mean pubo-urethral distance of patients in the <5 mm group was statistically significantly higher compared to patients in the >5 mm group (p=0.031). Postoperatively, detrusor thickness was statistically thicker in the group with a band distance >5 mm (p=0.030). The findings are summarized in Table 2.

No differences were observed between the groups in terms of preoperative FSFI scores. The postoperative FSFI scores for the >5 mm group were significantly lower than those of the <5 mm group, including the postoperative FSFI average, all subscales except lubrication, and average change scores due to the operation (p<0.001 for all). The FSFI pre- to post-operative changes are summarized in Table 3.

The distance to the urethra was found to be significantly and negatively correlated with patients' postop FSFI levels (p<0.001) and FSFI preop-postop difference (p<0.001). There was no significant relationship found between the placement percentile and postop FSFI levels (p=0.553) or the FSFI preop-postop difference (p=0.905). Relationships between Mesh-Urethra Distance and Percentile ΔFSFI are summarized in Table 4.

Relationship between FSFI Preop-Postop Difference and Mesh-Urethra Distance is shown in Figure 2. The cut-off value for postop FSFI level when the distance to the urethra was >5 mm was ≤28.4 in the assessment, with 100% sensitivity and 97.6% specificity. The receiver operating characteristic curve is shown in Figure 3.

Table 1. Demographic data of patients and perineal ultrasound findings

	Distance between the mesh and the urethra		
	<5 mm	**>5 mm**	**p[#]**
	Mean ± SD Min.-Max. (median)	**Mean ± SD Min.-max. (median)**	
Distance to urethra, mm	3.60±0.56 2.7-5.0 (3.6)	5.82±0.35 5.2-7.0 (5.8)	<0.001
Age, years	39.59±3.38 33.0-46.0 (40.0)	39.17±2.90 34.0-45.0 (40.0)	0.595
Gravidity, (n)	2.98±1.04 1.0-5.0 (3.0)	3.61±1.45 1.0-8.0 (3.0)	0.054
Parity, (n)	2.46±0.78 1.0-4.0 (2.0)	2.61±0.97 1.0-5.0 (3.0)	0.620
Spontaneous vaginal delivery, (n)	2.27±0.63 1.0-3.0 (2.0)	2.49±0.87 1.0-5.0 (2.0)	0.291
Body mass index, kg/m^2	25.14±3.18 18.3-31.2 (25.0)	24.81±2.06 18.3-29.4 (24.6)	0.666
Tobacco user, n (%)	16 (39.0)	13 (31.7)	0.488[ε]
Menopause, n (%)	0 (0%)	0 (0%)	-
Sling percentile placement	66.46±5.62 55.0-80.0 (65.0)	65.37±5.41 60.0-80.0 (65.0)	0.274
Preoperative retrovesical angle >140°, n (%)	41 (100)	41 (100)	-
Preoperative urethral rotation angle >45°, n (%)	41 (100)	41 (100)	-

[#]Mann-Whitney U test, [ε]chi-squared test, min.: Minimum, max.: Maximum, SD: Standard deviation

Table 2. Pre- and postoperative perineal ultrasound findings and ICIQ-SF scores

	Distance between the mesh and the urethra				
	<5 mm		>5 mm		p#
	Mean ± SD	Min.-max. (median)	Mean ± SD	Min.-max. (median)	
Preoperative					
Descent of bladder neck	31.63±3.47	26-40 (31)	31.15±2.74	28-42 (31)	0.667
Pubo-urethral distance	14.37±1.68	11-18 (14)	13.61±1.53	12-18 (13)	0.031
Urethral thickness	4.83±0.77	4-7 (5)	4.44±0.67	3-5 (5)	0.054
Detrusor thickness	3.54±0.60	3-5 (3)	3.76±0.80	2-5 (4)	0.139
Cystocele descent	7.20±1.29	4-10 (7)	7.15±1.15	5-10 (7)	0.728
Rectum descent	6.98±1.68	4-10 (7)	6.90±1.41	4-10 (7)	0.713
Uterine descent	6.07±1.71	4-12 (6)	6.20±1.36	4-9 (6)	0.465
ICIQ-SF question 6	3.06±0.17	3.0-3.5 (3.0)	3.06±0.17	3.0-3.5 (3.0)	1.000
ICIQ questions 3-5 total score	12.39±2.77	9.0-18.0 (12.0)	11.54±2.09	9.0-15.0 (11.0)	0.226
Standing stress test, n (%)	41 (100.0)		41 (100.0)		-
Supine stress test, n (%)	38 (92.7)		37 (90.2)		1.000£
Q tip test >30°, n (%)	41 (100.0)		41 (100.0)		-
Postoperative					
Descent of bladder neck	16.24±2.49	10-21 (16)	16.27±2.07	12-20 (16)	0.978
Pubo-urethral distance	5.85±1.24	4-8 (6)	6.15±1.30	4-8 (6)	0.316
Urethral thickness	3.93±0.57	3-5 (4)	4.15±0.69	3-5 (4)	0.113
Detrusor thickness	3.02±0.65	2-4 (3)	3.34±0.69	2-4 (3)	0.030
Cystocele descent	6.61±1.46	4-10 (7)	6.85±1.17	5-9 (7)	0.527
Rectum descent	7.00±1.77	4-10 (7)	6.88±1.31	5-10 (7)	0.637
Uterine descent	6.02±1.51	4-10 (6)	6.15±1.33	4-10 (6)	0.484
ICIQ-SF question 6	1±0	1-1 (1)	1±0	1-1 (1)	1.000
ICIQ questions 3-5 total score	1.71±1.97	0-4 (0)	1.20±1.79	0-4 (0)	0.205
Standing stress test, n (%)	0 (0)		0 (0)		-
Supine stress test, n (%)	0 (0)		0 (0)		-
Q tip test >30°, n (%)	0 (0)		0 (0)		-

#Mann-Whitney U test, £Chi-squared test, ICIQ-SF: Incontinence Questionnaire-Short Form, min.: Minimum, max.: Maximum, SD: Standard deviation

Discussion

In the present study, improvement in sexual function was observed after TOT. However, in the group with a mesh-urethra distance >5 mm, sexual function scores were mostly significantly lower compared to the <5 mm group. In recent years, the use of ultrasound has increased in urogynecological fields, such as urinary incontinence and pelvic organ prolapse due to its non-invasive, dynamic nature and easy accessibility. In a recent study focusing on SUI, changes in the proximal urethra and retrovesical angle were observed to be potentially correlated with clinical symptoms in perineal ultrasound assessments (6). Another study involving SUI and a control group found that perineal ultrasound revealed higher urethral rotation, bladder neck descent, and posterior urethrovesical angle in patients compared to the control group, both at rest and during the Valsalva maneuver (14). The same study showed that patients with higher maximum urethral closure pressure exhibited greater rotation angle and urethrovesical junction movement during urodynamic testing. In the present study, both groups of stress incontinent patients had preoperative retrovesical angles >140° and urethral rotation angles >45°. While imaging plays a limited role in evaluating mild pelvic prolapse cases with a single pelvic compartment, translabial perineal ultrasound allows for the assessment of multiple compartments (15). Beyond pelvic organ prolapse, a recent review highlighted the significant potential of translabial perineal ultrasound in investigating urinary and anal incontinence, complications following sling-mesh surgery, and pelvic floor disorders (16).

Table 3. Preoperative-postoperative FSFI scores

	Distance between the mesh and the urethra				
	<5 mm		>5 mm		p#
	Mean ± SD	Min.-max. (median)	Mean ± SD	Min.-max. (median)	
Preoperative FSFI					
Total score	19.53±1.47	15.1-23.1 (19.6)	19.96± 1.27	17.5-23.1 (20.1)	0.158*
Desire	2.37±0.50	1.2-3.6 (2.4)	2.30±0.54	1.2-3.6 (2.4)	0.574
Arousal	4.26±0.81	2.9-5.7 (3.8)	4.45±0.78	2.9-5.7 (4.5)	0.236
Lubrication	3.72±0.33	2.7-4.5 (3.6)	3.83±0.31	3.0-4.5 (3.9)	0.154
Orgasm	2.10±0.36	1.2-2.8 (2.0)	2.20±0.36	1.2-2.8 (2.0)	0.247
Satisfaction	3.05±0.31	2.0-3.6 (3.2)	3.10±0.28	2.4-3.6 (3.2)	0.565
Pain	4.03±0.33	3.6-4.8 (4.0)	4.09±0.29	3.6-4.8 (4.0)	0.285
Postoperative FSFI					
Total score	31.46±1.43	25.2-34.2 (31.6)	26.40±1.07	24.6-28.4 (26.4)	<0.001
Desire	4.98±0.57	3.6-6.0 (4.8)	3.67±0.33	3.0-4.8 (3.6)	<0.001
Arousal	8.27±0.64	6.3-9.2 (8.6)	6.80±0.57	5.7-7.6 (7.0)	<0.001
Lubrication	4.17±0.26	3.6-4.8 (4.2)	4.08±0.33	3.6-5.1 (3.9)	0.100
Orgasm	4.56±0.45	2.8-5.2 (4.8)	3.66±0.39	2.8-4.4 (3.6)	<0.001
Satisfaction	4.13±0.35	3.2-4.8 (4.0)	3.51±0.34	3.2-4.4 (3.6)	<0.001
Pain	5.37±0.38	4.8-6.0 (5.2)	4.68±0.58	4.0-5.6 (4.8)	<0.001
ΔFSFI	11.93±1.54	6.2-14.9 (12.1)	6.44±1.19	4.1-8.9 (6.5)	<0.001*

*Student's t-test, #Mann-Whitney U test, FSFI: Female Sexual Function Index, min.: Minimum, max.: Maximum, SD: Standard deviation

Table 4. Relationship between mesh-urethra distance and percentile ΔFSFI

	Distance to the urethra		Percentile placement	
	r	p	r	p
Sling percentile placement	-0.193	0.082		
Postoperative FSFI	-0.729	<0.001	0.067	0.553
ΔFSFI	-0.726	<0.001	0.013	0.905

FSFI: Female Sexual Function Index

In recent years, the widespread adoption of midurethral slings in patients with SUI has been attributed to the natural structure of the sling. In a prospective study involving Tension-free vaginal tape, TOT, and single-incision sling procedures that investigated the angle between the mesh arms and their position relative to the urethra, retropubic slings were found to have a more frequent midurethral placement compared to other types of slings (17). However, in the same study, sonographic measurements were not found to be to correlated with urinary symptoms at three years after surgery. In a similar study involving patients who underwent TOT and were evaluated with transperineal ultrasonography, women with incontinence six months after surgery showed discrepancies in the movement of the urethra with the sling compared to continent women, along with asymmetry between the mesh arms, bladder neck descent, and varied sling positions (18).

In another study using the symphysis pubis as a reference point, successful TOT outcomes demonstrated that the sling position on ultrasound became more caudal than the symphysis pubis during the Valsalva maneuver, yet it still remained within the midurethra (19). A recent study using perineal ultrasonography revealed that in cases of postoperative urinary retention, the mesh tended to be situated more proximally rather than within the midurethra, with obstructive slings positioned <10 mm from the bladder neck (20). An ultrasound study conducted a decade after TOT procedures found a cut-off of 5 mm for the distance between the sling and urethra, and urinary incontinence in women was found to be associated with mesh-urethra distances >5 mm (21). That study also indicated that the sling position was not significantly associated with overactive bladder symptoms.

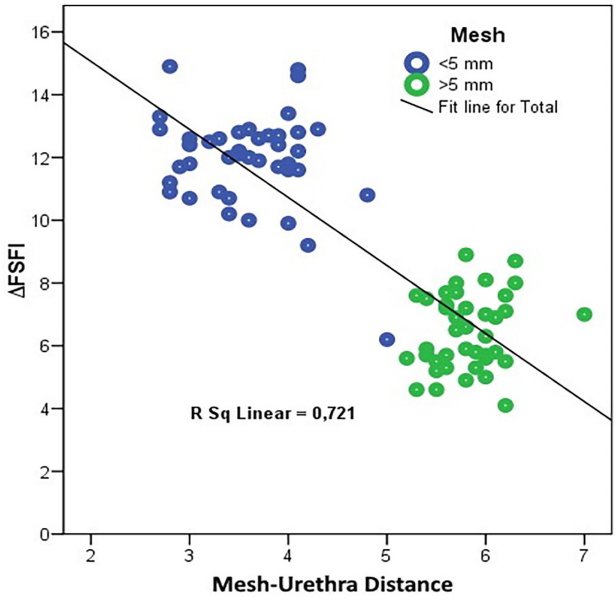

Figure 2. Relationship between FSFI preoperative-postoperative difference and mesh-urethra distance
FSFI: Female Sexual Function Index

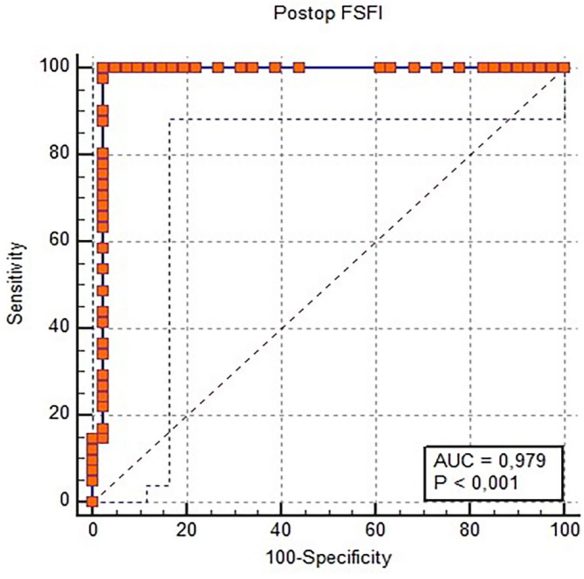

Figure 3. ROC curve
FSFI: Female Sexual Function Index, ROC: Receiver operating characteristic, AUC: Area under the curve

For patients with SUI who receive TOT procedures, postoperative sexual function can significantly improve (1). In the present study, we observed an increase in postoperative FSFI scores in both groups. In our literature review, the combination of perineal ultrasonography, TOT, and sexual functions stands out as being unique. We believe that, in patients with a mesh-urethra distance of >5 mm, the mesh being closer to the anterior vaginal wall's erogenous zone might have a greater impact on sexual functions. In the present study, we observed no difference in terms of the position on the sling percentile among the continent patients in the groups, and we also found that in terms of sexual functions, the distance between the mesh and the urethra was more influential than the sling percentile where the mesh was positioned.

The strengths of this study stem from its rigorous follow-up and comprehensive clinical approach, including ultrasound measurements. The fact that follow-up examinations were not conducted by the operating surgeon helped to minimize bias. Subjective data were collected using validated questionnaires.

Study limitations

The limitation of the study was its small patient cohort. Although the inclusion of only continent patients in our study was seen as a limiting factor, both preoperative and postoperative low FSFI scores are expected in women with postoperative incontinence, which could lead to confusion in the results. Therefore, we believed that evaluating sexual functions and the relationship with perineal ultrasound in patients who achieved both objective and subjective cures would be more realistic and in line with norms. Additionally, the pathology underlying sexual dysfunction may be multifactorial and linked to etiological factors. While we found that mesh position affected FSFI scores in our study, reaching a definitive conclusion on this matter would require support from larger cohorts and multicenter data.

Conclusion

Sexual functions are more adversely affected in patients with a mesh-urethra distance >5 mm as observed via perineal ultrasound.

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Ethics Committee Approval: *The study was approved by the University of Health Sciences Turkey, İstanbul Prof. Dr. Cemil Taşcıoğlu City Hospital Local Ethics Committee (approval number: 27, date: 23.01.2023).*

Informed Consent: *Written consent was obtained from each participant.*

Author Contributions: *Surgical and Medical Practices: O.D.; Concept: O.D.; Design: F.Ş.; Data Collection or Processing: F.Ş., O.D.; Analysis or Interpretation: F.Ş., O.D.; Literature Search: F.Ş., O.D.; Writing: F.Ş.*

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