

# Does Vaginal Anti-Incontinence Surgery Affect Sexual Satisfaction? A Comparison of TVT and Burch-Colposuspension

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## ABSTRACT

*Objective:* To evaluate the sexual satisfaction rates of women who underwent tension-free vaginal tape (TVT) procedure for stress urinary incontinence and compare it with the results of Burch-colposuspension.

*Materials and Methods:* A self-administered questionnaire was given to 81 patients who had undergone TVT or Burch-colposuspension at our institution to determine sexual satisfaction rates and reasons for dissatisfaction. Forty-seven patients in TVT group and 22 patients in Burch-colposuspension group were considered eligible for the study. The mean follow-up period and age of patients in TVT and Burch-colposuspension groups were 34 months, 51.5 years and 89 months, 52.9 years, respectively. The difference between the ages in the two groups was not statistically significant, while the difference between mean follow-up periods was significant ( $p = 0.000$ ).

*Results:* When evaluating sexual satisfaction, 73% in the TVT group and 86% in the Burch-colposuspension group did not report any difference in sexual satisfaction following surgery, while in the TVT group, 23% expressed negative and 4% positive changes, and in the Burch-colposuspension group 9% expressed negative and 5% positive post surgical changes. The differences in sexual satisfaction rates between the two groups were not considered significant. The majority (54%) of those who expressed a negative change suffered from dyspareunia.

*Conclusions:* Although sexual satisfaction seems to be more adversely affected by TVT compared to Burch-colposuspension, the difference was not statistically significant. Further studies are required concerning different anti-incontinence techniques in order to arrive at more precise conclusions.

**Key words:** *urinary incontinence, stress; surgical procedures, operative; sexual dysfunction, physiological*  
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## INTRODUCTION

Sexual dysfunction in women is a fairly common problem and one that occurs in as many women as in men. It is an important health problem that affects the quality of both women and their partners' lives (1,2). Although the available literature on this subject has been increasing, less is known about female sexual dysfunction than male sexual dysfunction

(3). It has been observed in various studies that the anterior and distal parts of the vagina, which is the most innervated, play an important role in sexual function (4,5).

Many surgeons currently prefer to use tension-free vaginal tape (TVT) procedure to treat stress urinary incontinence (SUI). However, the effect on sexual function of vaginal surgery for incontinence has not yet been clearly established and only limited

data on this subject are reported in the literature (6-9). Altered sexual function might be attributed to vaginal surgery, which may cause vaginal narrowing or can damage the highly innervated anterior vagina (5).

The aim of this study was to use a questionnaire to evaluate any changes in sexual satisfaction of women who underwent a TVT procedure for SUI. The results of this evaluation were compared with the results from those women who had undergone surgery using a suprapubic anti-incontinence technique (Burch-colposuspension).

## MATERIALS AND METHODS

Eighty-one patients who had undergone TVT procedure (between 1999 and August 2000) or Burch-colposuspension (between July 1994 and June 1998) at our institution were contacted by phone. Sixty-nine patients (85%) who were sexually active pre-and postoperatively, had a partner, and a successful surgical outcome were invited for a hospital consultation. Forty-seven patients in the TVT group and 22 patients in the Burch-colposuspension group were considered eligible for the study. The mean age of the patients who underwent TVT was 51.5 years (median 51, range 38-68) whereas the mean age of the patients who underwent Burch-colposuspension was 52.6 years (median 52, range 36-67). Concomitant rectocele or cystocele repair was performed in 3 patients. All Burch-colposuspension surgery was performed under general anesthesia, whereas TVT was performed with either local or general anesthesia. The mean follow-up period of patients in TVT and Burch groups were 34 months (range 20-45) and 89 months (range 55-111), respectively (Mann Whitney-U,  $p = 0.000$ ).

Since no validated questionnaire in our language was available at that time, a questionnaire containing 8 questions was developed in our department to evaluate sexual satisfaction of the patients and their partners after the operation (Figure-1).

Chi-square, Fisher's exact, and Mann-Whitney U tests were performed for statistical analysis. The Fisher's exact test was only used, instead of Chi-square test, when the expected number of patients in either category was less than five.

## RESULTS

When evaluating sexual satisfaction, 34 of 47 patients (73%) in TVT group and 19 of 22 patients (86%) in Burch-colposuspension group did not report any difference after the operation. It was affected negatively or positively in 11 (23%) and 2 (4%) patients in the TVT group, and in 2 (9%) and 1 (5%) patients in the Burch-colposuspension group, respectively. The differences of sexual satisfaction rates between the two groups were not significant (Fisher's exact test;  $p = 0.137$ ) (Table-1). In the TVT group, of the 11 patients expressing negative effect, 5 were suffering from dyspareunia, 2 from sexual desire disorders, while 2 had vaginal dryness and 2 had orgasmic disorders. Both of the negatively effected patients in the Burch group also had dyspareunia (Table-2). None of the patients had declared any of these problems prior to the surgery.

When evaluating the sexual satisfaction of the partners, 45 of 47 patients' partners (95.7%) in the TVT group and 22 of 22 patients (100%) in the Burch-colposuspension group did not report any difference. Only one partner (2%) in the TVT group mentioned that his sexual life deteriorated after the operation.

Thirty-six of 47 patients (76.5%) in the TVT group and 19 of 22 (86.3%) in the Burch-colposuspension group were satisfied with the operation, and 37 patients (76.5%) in TVT group and 19 (86.3%) in Burch-colposuspension group declared that, in the same circumstances, they would have undergone the surgery again and could recommend it to their relatives or friends.

## COMMENTS

Sexual dysfunction in women is a fairly common problem and age, level of education, physical and mental health status seem to affect this situation. It is a health problem that affects both women's as well as their partners' quality of life (1). Urinary incontinence itself is also an important parameter that negatively affects all of the sexual functional parameters (10). Women who experience leakage during intercourse hope that their sexual function will improve follow-



## Vaginal Anti-Incontinence Surgery and Sexual Satisfaction

**Table 1** – Satisfaction rates of the continent and sexually active women in TVT and Burch-colposuspension groups.

	TVT (47)	Burch (22)	p Value*
Sexual satisfaction during intercourse after surgery			
Worse	11 (23%)	2 (9%)	
Better	2 (4%)	1 (5%)	
Same	34 (73%)	19 (86%)	0.1374*
Sexual satisfaction of the partner after surgery			
Worse	1 (2%)	-	
Better	2 (4%)	-	
Same	44 (94%)	22 (100%)	0.6811*
Satisfied with the outcome of the operation	35 (74.5%)	19 (86.6%)	0.355**
Accept to undergo operation again	36 (76.5%)	19 (86.6%)	0.523**
Recommend it to their relatives or friends	36 (76.5%)	19 (86.6%)	0.523**

\* = chi square; \*\* = Fisher exact test.

**Table 2** – The reasons for dissatisfaction after TVT and Burch-colposuspension.

	TVT	Burch
Sexual desire disorders		
Hypoactive sexual desire disorder	2	-
Sexual aversion disorder	-	-
Sexual arousal disorder	-	-
Lubrication or vaginal dryness	2	-
Orgasmic disorder	2	-
Sexual pain disorder		
Dyspareunia	5	2
Vaginismus	-	-
Other sexual pain disorder	-	-
Total	11	2

Lemack et al. evaluated the sexual function of 56 women after anterior vaginal wall surgery for SUI and found that the sexual lives of 18% of the women worsened following surgery (7). They also observed that postmenopausal women on hormone replacement therapy were more likely to be sexually active following surgery (46%) than those who were not on hormone replacement therapy (17%) (7). In one of the prospective studies, Rogers et al. reported that sexual function did not improve after anti-incontinence surgery despite improvement of incontinence (13).

Many studies evaluating the sexual function after TVT showed conflicting results, with a reported sexual dysfunction after surgery ranging from 3 to 20% of cases (8,14-19). We believe that the limitations of current methods of sexual function evaluation and different study design and patient selection criteria prevent a reliable comparison of results. Maatia et al. evaluated the sexual function of 43 sexually active women who underwent TVT and noted that 72%

of women did not experience any difference, while sexual function in 5% of the patients had improved and 14% worsened(8). In this study, worsening of sexual satisfaction following surgery was not found to be due to surgical procedures but decreased libido and vaginal atrophy was due to decreased postmenopausal estrogen levels (8). Berglund et al. reported that there was no significant difference in sexual activity before and after surgery in women who had undergone surgery for SUI (20). Recently Shah et al. showed that overall sexual function did not change in women undergoing placement of a mid to distal polypropylene urethral sling (19). Wang et al. investigated the change of the patients' sexual function after the surgery for SUI, and compared the laparoscopic Burch-colposuspension with TVT (21). In this study they found that surgery adversely affected the patients' sexual life, with TVT having a lesser negative affect than Burch-colposuspension. In our study, when evaluating sexual satisfaction, 73% of women who underwent TVT operation did not experienced any difference. In 4% of patients, sexual satisfaction was improved, while in 23% of patients, it had worsened. In the Burch-colposuspension group the number of the patients who were adversely affected and reported a worsening of sexual satisfaction after the operation was lower (9%) and not considered statistically significant. A total of 11 patients reported sexual dysfunction after vaginal-incontinence surgery (TVT) and, of these patients 45% described dyspareunia post-operatively while 18% had orgasmic disorder, 18% suffered from lubrication or vaginal dryness and 18% had decreased sexual desire. In the Burch-colposuspension group, 2 patients whose sexual lives had deteriorated after the operation reported dyspareunia. Recently, the study reported by Ghezzi et al. showed no significant difference in the incidence of dyspareunia (18). The relationship between dyspareunia and vaginal surgery is still unclear. Some authors have indicated that symptomatic vaginal narrowing is rare even in those patients undergoing simultaneous posterior repair (7,12,22,23), while others have stated that the vaginal narrowing is primarily experienced when the posterior wall defect has been corrected with anti-incontinence surgery (6,24). Haase et al. evaluated the influence of the operations for stress incontinence on sexual life and found that dyspareunia

was observed in all of the patients in which posterior wall repair was performed during the operation (6). We also performed rectocele repair in 2 patients and cystocele repair in a patient concomitantly while performing TVT operation. None of these patients reported dyspareunia. Lemack et al. noted that the number of patients who suffered from dyspareunia preoperatively (29%) decreased postoperatively (20%) (7).

Another limitation of our study was that we were not able to use a validated questionnaire. Since there was not a validated Turkish version of one of the sexual function questionnaires, we created a questionnaire, which contained 8 questions in this study. To compare the success of anti-incontinence surgery and to evaluate the sexual function of women after these operations, validated questionnaires are important to standardize the studies. The Turkish version of the Female Sexual Function Index (FSFI) has recently been validated by the Turkish Andrological Society. Despite this limitation, we believe that our results provide a useful insight for clinicians when managing and counseling the patients who have undergone vaginal surgery for SUI.

## CONCLUSIONS

Although sexual satisfaction seems to be more adversely affected by TVT compared to Burch-colposuspension, the difference was not statistically significant. Further studies are warranted concerning the different incontinence techniques in order to provide more precise conclusions.

## CONFLICT OF INTEREST

None declared.

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