

Improvement in Psycho-social and Sexual Health of Women after Treatment of Stress Urinary Incontinence: A Patient Reported Outcome Study

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Abstract

Introduction: Stress urinary incontinence (SUI) in women has an estimated prevalence of 12% to 46%. Incontinence significantly affects women's psycho-social behavior and sexual function, leading to feelings of low self-esteem, low self-confidence, increased social withdrawal, ultimately reducing their quality of life. Trans-Obturator Tape (TOT) is an established procedure to treat SUI with success rates ranging from 62% to 98%. The objective of this study was to record patient reported outcomes on psycho-social and sexual health after TOT procedures in females with SUI.

Methods: We followed up all the patients who underwent TOT procedure for SUI between January 2009 and December 2018 and assessed their psycho-social and sexual health using the quality of life questionnaire and compared it to their pre-operative scores.

Results: The mean age of our cohort was 44 years (range 34-62) and mean BMI was 29 kg/m² (range 20-34). 39.1%, 47.8% and 13% cases were of Grade 1, 2 and 3 SUI respectively. The cure rate in our patients was 100% with a median follow up period of 74 months (3-122 months).

There was improvement in the psycho-social behavior in all patients as observed on quality of life subscale 'Psychosocial Impact' (p<0.001). The questionnaire also revealed complete alleviation from sexual concerns after operation in all patients (p<0.001).

Conclusions: Trans-obturator tape is an effective minimally invasive treatment for SUI, it elevates the overall persona of women, enabling them to work, involve in sexual and social activities within a short span of time.

Keywords: Stress; Trans-obturator tape; Psycho-social; Sexual health

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Citation: Musale A, Neeli SI (2019)
Improvement in Psycho-social and Sexual
Health of Women after Treatment of Stress
Urinary Incontinence: A Patient Reported
Outcome Study. J Nephrol Urol Vol.3 No.1:2

Received: April 02, 2019; **Accepted:** April 19, 2019; **Published:** April 26, 2019

Abbreviations: SUI: Stress Urinary Incontinence; TOT: Trans-Obturator Tape; QOL: Quality of Life

Introduction

Stress urinary incontinence (SUI) is defined as involuntary loss of urine on effort or physical exertion including sporting activities, or on sneezing or coughing. SUI has an estimated prevalence of 12% to 46%, with annual incidence ranging from 2% to 11%, it is increasingly seen in middle aged women [1,2].

SUI leads to feelings of inferiority and social embarrassment in

women and restricts them from engaging in social activities and get-togethers, also from participation in sports and recreational activities [1-4]. It also affects the sexual performance of the affected women and may lead to marital discord.

The treatment of SUI includes conservative therapies like lifestyle modifications, pelvic floor muscle and bladder training. For patients with bothersome SUI, surgical intervention in the form of midurethral sling procedures provide effective relief from urinary incontinence. Transobturator tape (TOT) procedure is an established minimally invasive midurethral sling procedure

with success rates ranging from 62% to 98% and is associated with minimal complications [5]. The relief from stress urinary incontinence contributes to rejuvenation of the social and sexual life in the affected patients. We report the psycho-social and sexual health improvement in women undergoing TOT procedure for SUI.

Materials

The authors did a chart review of the 23 patients who underwent TOT procedure for stress urinary incontinence between January 2009-December 2018 at Department of Urology, KLES hospital in Belagavi, Karnataka. Their demographic data, grade of SUI, duration of SUI and their urinary complaints were documented. All the patients had answered the Quality of Life questionnaire (Table 1), to assess the impact of Stress Urinary Incontinence on their psycho-social and sexual health. This questionnaire comprised of seven questions, five questions emphasizing on their Psycho-social life and two questions on sexual life. Higher scores on the questionnaire indicated a poor quality of life. The questionnaires were administered to them in their vernacular language (English, Hindi, Kannada, Marathi).

All patients were subjected to TOT procedure to treat their SUI and discharged after 24 hours, with instructions to resume their routine activities and abstain from sexual intercourse for four weeks.

To assess the long term impact of the TOT procedure and on the psycho-social and sexual health, we contacted each patient, the quality of life questionnaire was re-administered to the patient and their answers were sought. We compared the pre-operative and post-operative scores. Statistical analysis was done using the Paired Student T-test.

Results

The demographic data of the twenty-three operated cases of Trans-Obturator Tape procedures for SUI are in Table 2. Pre-operatively all the patients had significant impact on the psycho-social and sexual health scores. All the patients subjected to TOT procedure withstood the surgery well with no complications. The patients were discharged twenty-four hours post-operatively. All the patients were continent and were able to void urine comfortably. The median follow-up period in our study was 72 months (3-122 months).

Table 1: Questionnaire for assessment of quality of life in patients with urinary incontinence (KLES Dr. Prabhakar Kore Hospital and Medical Research Center, Belagavi).

Questions ↓	SCORE →	1	2	3	4	5
		Never	Rarely	Sometimes	Often	Always
Q1. I feel embarrassed being in public due to my incontinence						
Q2. I restrict my travel due to incontinence						
Q3. I withdraw myself from social and recreational activities						
Q4. I feel distanced from my family and friends due to my incontinence						
Q5. People distance me due to my odour						
Q6. I suffer from reduced intimacy, affection and physical proximity with my partner/family						
Q7. I worry about engaging into sexual activities due to my incontinence.						
Total Score						

On the psycho-social scale, all the patients showed dramatic improvement after undergoing surgery (p value <0.001) (Figure 1). The pre-operative mean score for 'psycho-social health' was 21, which improved to a post-operative score of 5 in all the women ($p < 0.001$) (Tables 3 and 4).

After the surgery the patients stopped feeling embarrassed or humiliated which was the case when they had incontinence. Also their worry about smelling of urine was relieved after surgery and they were able to travel at their will and enjoy their life.

The relief of incontinence after surgery improved their intimacy with their partners and they were able to engage in sexual activities. One patient had post coital vaginal discomfort after surgery which resolved within 2 weeks without requiring any medications.

Discussion

Stress Urinary Incontinence may not be life-threatening for the patients, but it has the potential to have a tremendous impact on the mental and physical health of women by hindering various aspects of a woman's life. Even though it is treatable with medications and noted to improve with mid-urethral sling surgeries, there remains a potential stigma attached to this condition. Studies investigating the quality of life of patients with SUI [6,7] have reported significant mental and emotional discomfort with an unquestionable influence on their everyday routine. In our study, 100% ($n=23$) of the women scored high on the 'Psycho-social Impact' subscale assessment (mean score of 21) prior to surgery. Most women experienced feelings of depression, frustration and inability to stay away from home for longer period of time.

Reviews have shown that the psychological impact of urinary incontinence can be devastating leading to major depression and social isolation [8]. Our results also reveal that women with SUI often felt embarrassed among their peers due to their condition. However, on follow-up they showed improvement in QOL scores ($p < 0.001$) post-operatively with TOT procedure.

Another aspect of social interaction for young and middle aged women is through either indulging in sports or moderate exercise. However, this daily activity is also massively impacted

Table 2: Demographic characteristic of the cohort.

Characteristic		Value (N)	Percentage (%)
Age (mean)		44 years (range 34-62)	
BMI (mean)		29 kg/m ² (range 20-34)	
Parity		2 (range 1-4)	
Prior Pelvic Organ Prolapse Repair		1	4.3
Menopausal status– Premenopausal		18	78.2
Postmenopausal		5	21.7
Comorbidities – Diabetes Mellitus		2	8.6
Hypertension		5	21.7
Both		1	4.3
Grade of SUI (Ingelmann- Sundberg Scale)	I	9	39.1
	II	11	47.8
	III	3	13

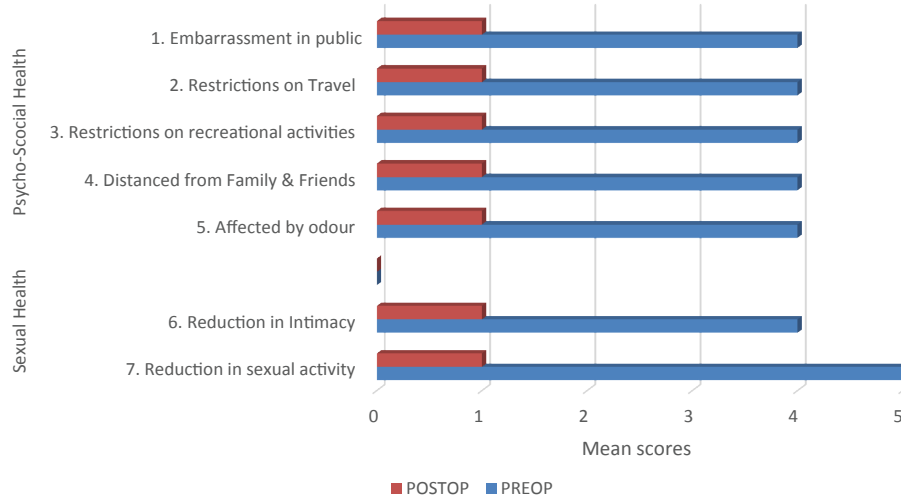


Figure 1 Pre and Post-operative distribution of mean Psychosocial and Sexual Health Scores.

Table 3: Comparing the QOL in patients with SUI before and after treatment (N=23).

Severity →	Never		Rarely		Sometimes		Often		Always	
	Pre-op	Post-op	Pre-op	Post-op	Pre-op	Post-op	Pre-op	Post-op	Pre-op	Post-op
Questions ↓										
Embarrassment in public	0	23	0	0	1	0	10	0	12	0
Restrictions on Travel	0	23	1	0	3	0	9	0	10	0
Restrictions on recreational activities	0	23	0	0	3	0	9	0	11	0
Distanced from Family & Friends	0	23	0	0	2	0	11	0	10	0
Affected by odour	0	23	0	0	7	0	7	0	9	0
Reduction in intimacy	0	23	0	0	4	0	8	0	11	0
Reduction in sexual activity	0	23	0	1	1	0	8	0	14	0

Table 4: Distribution of Psycho-social and sexual health scores.

Psycho-Social Score	PRE- OP (mean)	POST-OP (mean)	P value
Q1-Q5	21	5	<0.001
Sexual Score			
Q6-Q7	9	2	<0.001
Total Score	30	7	

by the symptoms of incontinence [3]. In our study all the women suffered from lack of involvement in recreational activities such as long walks, exercises and routine gym workouts as they worried for leaking urine and not finding toilets around these places in time. However, their mean scores for this domain improved after surgery (p value <0.001).

Urinary incontinence has a major impact on the work performance of many employed women. In 2005, Fultz et al. in their study on prevalence and management of incontinence in workplace showed that 34% of the women had interruption in their office work because they needed frequent toilet breaks [9]. They also observed the negative impact on their work environment as the severity of the urinary symptoms increased. In our study, all the women ($n=23$) reported their hardships at public places including their work place, due to bad odor of urinary leak. This in turn also affected in poor concentration and performance of quality work, as they needed to use the toilets more frequently than their peers, due the fear of getting incontinent. This trouble was reported to be improved at the follow-ups post TOT procedures for all the patients.

Women with SUI also experienced lack of affection, emotional support from family and friends because of their varying voiding habits, including frequency, nocturia, and disturbed quality of sleep at night. Such women may have to make several trips to the washroom to urinate and prevent soiling of clothes/ prevent odor from linen and mattress. This may be dangerous for elderly women leading to injuries or fractures at washrooms [8]. In our study, all women ($n=23$) reported having distanced by family due to incontinence.

In our study we specifically investigated the sexual concerns of the women with SUI, and it was observed that patients with SUI grade 2 ($n=11$) and SUI grade 3 ($n=3$) were completely unsatisfied with their sexual life with their partner as shown in **Table 2**. On QOL scoring 27% ($n=6$) incontinent women irrespective of the grade of SUI were extremely worried about sex with their partner. In a study by M. Arts-de Jong et al. [2], it was reported that postoperatively with TOT procedure, there was significant improvement in sexual satisfaction ($p=0.05$) at 6 weeks of follow

up. In our study, patients even with high grades of SUI (Grade 2 and 3) reported alleviation of sexual discomfort ($p<0.001$) following treatment with TOT (**Table 3**). Coital incontinence is often under reported by women due to psycho-social taboos. Hui et al. [10] reported 281 (56%) women answered affirmatively having experienced coital incontinence while 43.4% of our patients had coital incontinence which was relieved in all the cases post TOT. 60.8% of women in our cohort were able to involve in sexual activities within 8 weeks from surgery. One woman (4.3%) had short lasting, post coital, vaginal discomfort requiring no medications or treatment.

In a study by Nelson et al., 38% women and 32% men reported that incontinence in the female partner had a negative impact on their personal relationship which included lack of intimacy and affection [11,12]. Another study showed women with advanced SUI had suffered impeded relationships with family members and friends, including inter-professional conflicts affecting their emotional state [7]. The questionnaire used in our study has shown that incontinent women often feared that their condition may further jeopardize their personal and social life with their family and friends. The QOL scores were reported very low prior to surgery which improved to satisfactory levels ($p<0.001$) when asked post-operatively. Our results are in accordance with the observations in the other studies [2,6-8]. The limitations of our study are small sample size, and limited questions to **Figure 1** assess the Sexual health of the patients.

Conclusion

Trans-obturator tape is an effective minimally invasive treatment for SUI, it elevates the overall persona of women, enabling them to work, involve in sexual and social activities within a short span of time.

Acknowledgement

The authors deeply acknowledge Dr. Phaneendra MS. for statistical analysis.

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