

Impact of Transobturator Tape Procedure on Quality of Life in Female Stress Urinary Incontinence

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ABSTRACT

Introduction: Stress Urinary Incontinence (SUI) is a highly prevalent condition in women. This condition is often associated with negative body image and reduced quality of life. Transobturator midurethral tape surgery is currently the most favored type of management. Several questionnaires are available to assess the impact of this surgery on quality of life.

Materials and Methods: We studied 32 patients who underwent Transobturator Tape (TOT) procedure for SUI. All patients were administered the Norwegian female incontinence questionnaire for urinary incontinence pre and post-operatively. We studied only the quality of life aspects in this questionnaire. Results were analysed using Wilcoxon paired rank test.

Results: Thirty two patients with a mean age of

45.97±8 years (33-65 years) were studied. The usage of incontinence pads per week following surgery markedly reduced from a mean of 3.16 to 0.41. Patients more often got involved in various social activities following surgery. The mean score improved from 2.88 to 0.25. In patients who avoided places and situations without easy availability of toilet, the mean score improved from 2.97 to 0.28 post operatively. The negative impact of urinary leakage on the patients vacation, family life, social life and sleep markedly reduced from a mean of 2.75 to 1.03 (p-value <0.001).

Conclusion: Almost all patients had significant improvement in all the domains studied in the quality of life aspect of Norwegian female incontinence questionnaire for urinary incontinence. TOT surgery in SUI patients not only cures the patient of urinary incontinence but also significantly improves the quality of life.

Keywords: Mid urethral sling, Social life, Surgical techniques

INTRODUCTION

Stress Urinary Incontinence (SUI) is a major health problem in modern society affecting millions of women and is associated with significant reduction in Health Related Quality of Life (HRQoL). About 10 to 40 % of women suffer from urinary incontinence [1]. QoL is a multidimensional phenomenon involving physical, emotional and social well-being. QoL is a highly subjective concept influenced by personal and cultural values, beliefs, goals, and life expectancy [2]. Urinary incontinence (UI) has a psychosocial and physical effect on patients. It creates feeling of shame, insecurity, impairs sexual life and affects sleep and social activities adversely. As a result, people with UI may have a lower quality of life [3,4]. Recent studies on treatment for SUI have incorporated various forms of QoL assessment tools, and have made HRQoL outcomes an integral part of efficacy evaluation [5].

Quality of life issues associated with SUI have not been appropriately addressed in developing nations. This can be due to multiple reasons like lack of awareness among the treating

physician and other health care providers, as well as the patients and their relatives. As most of the female patients are solely concerned about the cure of the physical aspect of UI, the QoL issues are often ignored. This may likely be due to the low socio-economic status, low literacy rates and ignorance of this population. Of late, in the field of female urology, especially in UI, several questionnaires on quality of life issues have been developed and are being used internationally after proper official linguistic validation [6]. These include Kings Health Questionnaire (KHQ), incontinence impact questionnaire, Norwegian female urinary incontinence questionnaire for urinary incontinence and many others. The Stress and Urgency Incontinence and Quality of Life Questionnaire (SUIQQ) has grade A recommendation by the international consultation on incontinence [7]. Mid urethral sling surgeries are becoming the first line treatment option for SUI in women and are associated with marked improvement in QoL [8]. In this study, it was not our intention to assess the cure, but to assess the improvement in QoL using SUIQQ questionnaire.

MATERIALS AND METHODS

This was a prospective observational study conducted at a Department of Genito-Urinary Surgery Government Medical College Kottayam, Kerala, India. Institutional review board clearance and consent was obtained from all the patients. All female patients who underwent transobturator mid urethral sling procedure were included in this study. Patients with prior pelvic radiotherapy, previous incontinence procedures, and major pelvic organ prolapse were excluded from the study. The study period extended from January 2008 to December 2015. Based on the data of previously conducted similar studies a sample size of 32 was derived. All patients underwent "outside in" TOT procedure under spinal anesthesia.

All the patients were given Norwegian female incontinence questionnaire for urinary incontinence before surgery [Table/Fig-1]. The Norwegian female incontinence questionnaire (SUIQQ) assessed the following domains: stress index, urgency index, QoL index, sexual activity and treatment satisfaction. In this questionnaire, the QoL index included questions 7, 9, 10 and 12. The same questionnaire was administered post operatively at 1, 3, and 6 months and there after yearly. The QoL at last follow-up was taken as the present quality of life and was compared with pre-operative QoL. Statistical analysis was done using Wilcoxon paired rank test.

RESULTS

A total of sixty one patients with SUI underwent TOT procedure during this period. Out of this, 32 patients were available for

the study. The mean age was 45.97 ± 8 years (33-65 years).

In our study the score for usage of incontinence pads per week significantly improved from a mean of 3.16 to 0.41 following TOT. This was statistically significant (p -value < 0.001). The mean score for avoidance of various social activities due to fear of leakage of urine preoperatively was 2.88, and this reduced to a mean of 0.25 following surgery which was statistically significant (p -value < 0.001). In patients who avoided places and situations without easy availability of toilet, the mean score improved from 2.97 to 0.28 post operatively (p -value < 0.001). The negative impact of urinary leakage on the patients vacation, family life, social life and sleep markedly reduced from a mean of 2.75 to 1.03 (p -value < 0.001) [Table/Fig-2].

The QoL index which is the sum of scores of usage of pads, avoidance of social situations due to fear of leakage, avoidance of places without toilet facility and the negative impact on vacation, family life and sleep improved from a mean value of 11.47 to a post-operative value of 1.31 ($p < 0.001$) [Table/Fig-3].

Along with the QoL index, we also assessed the stress index, urge index and sexual index. The mean stress index improved from 8.81 to 0.25 ($p < 0.001$), the mean urge index reduced to 0.41 from 3.44 ($p < 0.001$) and the mean sexual index score changed from 2.12 to 0.12 ($p < 0.001$) [Table/Fig-4].

In our study 25(78.1%) patients were very satisfied, 6 (18.8%) were moderately satisfied and only 1 patient (3%) was neither satisfied nor unsatisfied.

Number of incontinence pads used?									
<input type="checkbox"/>	None	<input type="checkbox"/>	1-3/ week	<input type="checkbox"/>	4-6 / week	<input type="checkbox"/>	1-4 / day	<input type="checkbox"/>	More than 4/ day
Frequency of avoiding activities because of the fear of leaking urine									
<input type="checkbox"/>	Never	<input type="checkbox"/>	Seldom	<input type="checkbox"/>	Sometimes	<input type="checkbox"/>	Often	<input type="checkbox"/>	Always
Number of times of avoiding places and situations where toilet is not easily available									
<input type="checkbox"/>	Never	<input type="checkbox"/>	Seldom	<input type="checkbox"/>	Sometime	<input type="checkbox"/>	Often	<input type="checkbox"/>	Always
Influence of urinary leakage on									
Vacation	Yes	<input type="checkbox"/>		<input type="checkbox"/>	No				
Family life	Yes	<input type="checkbox"/>		<input type="checkbox"/>	No				
Social life	Yes	<input type="checkbox"/>		<input type="checkbox"/>	No				
Sleep	Yes	<input type="checkbox"/>		<input type="checkbox"/>	No				

[Table/Fig-1]: Questionnaire used.

	N	Mean	Standard Deviation
Usage of Pads			
Pre op	32	3.16	0.628
Post op	32	0.410	0.837
Social Activity Score			
Pre op	32	2.88	1.070
Post op	32	0.25	0.568
Impact of Availability of Toilet on Social Activities			
Pre op	32	2.97	0.999
Post op	32	0.28	0.683
Life Style Score			
Pre op	32	2.75	1.244
Post op	32	1.03	4.076

[Table/Fig-2]: Showing pre and post op QoL score.

	N	Mean	Std. Deviation	Minimum	Maximum
Pre op QoL	32	11.47	2.383	3	15
Post op QoL	32	1.31	2.620	0	8

[Table/Fig-3]: Showing total QoL score.

	N	Mean	Standard Deviation	Standard Error	t value	p value
Stress Index						
Pre op	32	8.813	1.674	0.2959	28.13	0.001
Post op	32	0.250	0.1420	0.1420		
Urge Index						
Pre op	32	3.438	3.0684	0.5424	5.737	0.001
Post op	32	0.406	101601	0.2051		
Sexual Index						
Pre op	32	2.125	1.4756	0.2609	7.577	0.001
Post op	32	0.126	0.4479	0.0792		

[Table/Fig-4]: Showing pre and post-op stress, urge and sexual index.

DISCUSSION

About 28 to 47% of women in their midlife suffer from urinary incontinence. Urinary incontinence has a negative impact on the QoL in women due to social, psychological and medical problems [9,10]. As a result, women with urinary incontinence have got a lower QoL. Many studies have been performed in order to establish the effect of UI on QoL. Studies from Japan, France, Germany and England have shown a negative effect of urinary incontinence on QoL [11,12].

In our study of 32 patients, majority of patients were changing pads 3-4 times /day (29/32 patients). Following surgery, only eight patients had occasional urinary leak with usage of one pad per week. This was mainly due to the fear of leakage

rather than actual incontinence especially at places of worship. The change in score was from 3.16 to 0.41 following TOT (p value < 0.001). In a study by Jose et al., following TOT, there was significant reduction in the usage of pads from 79.17% pre operatively to 40.91% post operatively [13]. Frohme et al., in a study of 116 patients reported significant reduction in the usage of pads post operatively [14].

Women with urinary incontinence avoided physical activities, long trips and limited their social activities. These women considered UI not troublesome at home but, regarded it as bothersome outside their home and while relating with people and unfamiliar situations. Hence, they preferred staying home [13].

Twenty four out of 32 were frequently avoiding activities like hobbies, physical training or going out. This improved in 18 patients and the remaining 6 patients still continued to avoid social activities occasionally. Pre-operatively, mean score for avoiding activities was 2.88, and this reduced to 0.25 following surgery. In a study by Gilberti et al., even though 55% of women had relapse following TOT, on questioning, 80% of these patients would undergo the same surgery if necessary. This is because the symptoms after surgery were not as disabling as before [15].

Almost all the patients in our study avoided visiting places or situations where toilet was not easily accessible. In a conservative society like ours, women avoid places of worship because of religious and cultural beliefs. Following surgery, only seven patients occasionally avoided situation or places where toilet facilities were not easily accessible. The mean score for avoidance of places and situations without easy availability of toilet improved from 2.97 to 0.28 post-operatively.

Almost all the patients had significant interference in their family and social life. Post operatively, 26 patients had significant improvement in their social life. However, sleep was not disturbed in majority of the patients due to UI. The negative impact of urinary leakage on the patients' vacation, family life, social life and sleep markedly reduced from a mean score of 2.75 to 1.03.

The QoL index which is the sum of scores of usage of pads ,avoidance of social situations due to fear of leakage, avoidance of places without toilet facility and the negative impact on vacation, family life and sleep improved from a mean value of 11.47 to a post-operative value of 1.31.

LIMITATION

The limitations of our study were small sample size, absence of laboratory or urodynamic tests and study was completed from questionnaire based on the patient's statements.

CONCLUSION

The TOT approach is an effective treatment for stress urinary incontinence with low morbidity. QoL of majority of women with SUI improved significantly following TOT approach.

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