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Original Research Article

Quality of life assessment in women with stress urinary incontinence following Trans Obturator Tape (TOT) insertion: a prospective study

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ABSTRACT

Background: Stress urinary incontinence is a symptom or sign indicating that the woman has involuntary loss of urine associated with exertion in the absence of detrusor contraction. It has a significant impact on quality of life. TOT insertion is a popular procedure being done now. Studies related to quality of life assessment following Trans obturator tape (TOT) insertion is sparingly reported. Objectives of present study were to evaluate the quality of life following TOT insertion in patients with stress urinary incontinence and to assess the post operative complications.
Methods: This is a prospective study done in the Department of Obstetrics and Gynecology, Government Medical College, Thrissur from January 2015 to December 2016. 48 women with Stress urinary incontinence who underwent TOT insertion were included in the study, out of which 30 patients were followed up. The King's Health Questionnaire was used for assessment. Data was analyzed using Epi Info 7 and Microsoft Excel. The statistical analysis was done using student t-test.
Results: At 6 months follow up 86.66% (26) of patients had significant improvement in quality of life. 2 patients (6.66%) had postoperative voiding dysfunction, required recatheterisation, discharged after relief of symptoms. 2 patients (6.66%) had urge incontinence, advised medical management and was sent home, showed no improvement even after 6 months. 2 patients (6.66%) had continuous incontinence, fistula ruled out. Now they were lost to our follow up. Most common late post operative complication was groin pain. None had mesh erosion, bladder and bowel injuries.
Conclusions: TOT is a safe and effective procedure for the treatment of stress urinary incontinence (SUI) which significantly improves the quality of life.

Keywords: Recatheterisation, Stress urinary incontinence, Trans obturator tape

INTRODUCTION

Stress urinary incontinence is a symptom or sign indicating that the woman has involuntary loss of urine associated with exertion in the absence of detrusor contraction. It has a significant impact on quality of life. It's prevalence varies from 4% to 35% depending upon the variation in population studied.[1] The treatment options include initial conservative therapies (i.e., lifestyle interventions, pelvic floor muscle training, and bladder training), followed by surgery, which is an option for women whose quality of life is still impaired after a diagnosis of genuine stress incontinence.[2]

In France in 2001, Delorme introduced the transobturator sling procedure in humans.[3]

In transobturator tape (TOT) procedure, a small incision is placed in the groins and in the vagina under the urethra. The mesh is placed under the urethra in the correct position without having to pass needles blindly through the retropubic space, as in transvaginal tape (TVT). The

space that the needle passes through has been extensively studied and has been found to be a very safe space to work in. The mean operative time is significantly shorter in the transobturator sling and risk of bladder injury and of postoperative urinary retention is also considerably lower than other sling procedures.[4,5]

Quality of life is a multidimensional concept, which is assessed in various levels like physical, emotional, social wellbeing of a person and perception of one's own health status.

Relevance of the study

TOT insertion is a popular procedure being done now. Studies related to quality of life assessment following TOT insertion is sparingly reported. There is lack of long term outcome data6 and very few good quality studies are reported from this part of the world.

METHODS

This is a prospective study done in the Department of Obstetrics and Gynecology, Government Medical College, Thrissur from January 2015 to December 2016.

48 women with Stress urinary incontinence who underwent Trans Obturator Tape insertion were included in the study, out of which 30 patients were followed up. 22 patients were operated for genital prolapse and stress urinary incontinence. 8 patients were operated for SUI alone. Patients with prior anti-incontinence surgery, prior prolapse surgery, with history of pelvic radiation and neurological disorders affecting lower urinary tract were excluded from the study.

Assessment

The King's Health Questionnaire was used for assessment.[7] Patients were asked to fill the questionnaire before the procedure and 6 months after surgery. King's Health Questionnaire has 2 parts. Part 1 consists of general health perception and incontinence impact. Part 2 consists of role limitation, physical limitation, social limitations, personal relationships, emotions, sleep/energy and severity measures. It has scores ranging from 0 to 100. 0 shows best outcome and 100 shows worst outcome. Data was analyzed using Epi Info 7 and Microsoft Excel. The statistical analysis was done using student t-test.

RESULTS

T Mean age was 47.2 years. 63.3% (19) were in premenopausal and 36.6% (11) were in postmenopausal age group. 3.33% (1) was nulliparous and 96.66 (29) were multiparous.

At 6 months follow up 86.66% (26) of patients had significant improvement in quality of life.

Table 1: Statistical analysis of questionnaire part-1.

t-test. Paired 2 samples for the mean	Questionnaire part-1	Maximum score 200
	Preoperative score	6 months follow up
Mean	157.9	29.16
t-stat	11.55	
P two tail	0.00000232	
t critical two tail	2.01	

2 patients (6.66%) had postoperative voiding dysfunction, required recatheterisation and discharged after relief of symptoms. 2 patients (6.66%) had urge incontinence, advised medical management and was sent home, showed no improvement even after 6 months. 2 patients (6.66%) had continuous incontinence, fistula ruled out. They were being evaluated by urologist and now they were lost to our follow up.

Table 2: Statistical analysis of questionnaire part-2.

t-test. Paired 2 samples for the mean	Questionnaire part-2	Maximum score 600
	Preoperative score	6 months follow up
Mean	227.77	58.47
t-stat	5.63	
P two tail	0.000046	
t critical two tail	2.041	

Most common late post-operative complication was groin pain. None had bladder injuries and bowel injuries. There were no cases of mesh erosion in the patients followed up in present study.

DISCUSSION

In this study, 86.66% (26) of patients had significant improvement in quality of life at 6 months of follow up. In 2004, DeTayrac reported a 1-year cure rate of 84% with the TOT procedure.[8] In another study done by Spinosa in 2005 reported subjective complete and partial satisfaction rates of 92.3% and 4.2% respectively, following 16.3 months of follow up.[9] In 2007, Latthe et al. did a similar study and reported the subjective level of complete cure and improvement by patients were 89.6% and 8.8%, respectively.[10] Taweel et al. reported a 92% cure or improvement rate after 12 months and 85% after 24 months by an objective assessment.[11]

Abdel Fattal et al in 2010, did a randomized prospective single blind study, to compare the 'inside-out' versus 'outside-in' routes for transobturator tape insertion for urodynamic stress incontinence, and to identify independent risk factors for failure at 1 year. The patient-reported success rate was 80% with no statistically significant differences between the groups. The objective cure rate was 91% with no statistically significant difference between the groups. Previous incontinence

surgery and preoperative urgency incontinence were significant risk factors for failure of transobturator tape at the 1-year follow up.[12] Navneet et al in 2012 did a prospective experimental study to see the outcome measures in patients of SUI treated with transobturator sling. They reported that TOT application was successful in 93.2% cases in this study and it failed in 6.8% cases.[2] So present study is comparable with other studies.

In this study, at 6 months follow up none had bowel or bladder injury. There was no cases of mesh erosion in the patients followed up in present study. Mesh erosion is a late complication, which usually happens after 2 years. In this study, patients were followed up only upto 6 months.

CONCLUSION

TOT is a safe and effective procedure for the treatment of stress urinary incontinence which significantly improves the quality of life.

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