#147 TRANSOBTURATOR MALE SLING PLACEMENT IN POST PROSTATECTOMY SUI PATIENTS. DOES EXTERNAL BEAM RADIATION THERAPY INFLUENCE LONG-TERM CONTINENCE OUTCOME?

S. Morselli [1], V. Li Marzi [1], R. Baldesi [2], R. Fantechi [1], C. Traversi [2], M. Milanesi[3], G. Morelli [2], S. Serni [1]

[1] Department of Urology, Careggi Hospital, University of Florence, Florence, Italy
2 Department of Urology, AOU Pisa, Pisa, Italy
3 Department of Urology, San Giuseppe Hospital, Empoli, Italy

Introduction

Male stress urinary incontinence (**SUI**) is one of the main concerns in patients who will undergo radical prostatectomy, as it may involve up to 4-40% of patients[1].

Male SUI after prostatectomy varies in duration and in entity, as it is usually limited, thus in many cases it may be successfully managed conservatively with pelvic floor muscle training, However, a portion of patients may require surgery, in particular artificial urinary sphincter (AUS) implantation that has a high complication rate. Male slings are also an option, despite they might be successful especially in mild to moderate SUI. External Beam radiation therapy (EBRT) should be considered a negative prognostic factor, as reported in 2019 Urinary Incontinence European Association of Urology Guidelines. In literature, some authors demonstrated male sling efficacy and safety even after RT[1], thus improving male SUI treatment possibilities after EBRT.

Aim of our study is to analyze long term outcomes and complication rate of transobturator male sling placement for the management of male SUI after EBRT in patients submitted to previous radical prostatectomy.

Methods and Materials

•Study is designed as a retrospective evaluation of surgery outcomes. Randomization and power analysis were not possible according to study design. Study is in line with declaration of Helsinki and all patients were enrolled only after informed consent acquisition. Follow up data are routinely prospectively collected during follow up visits, and before transobturator sling (Advance©) placement. All cases were performed from expert surgeons from two urologic centres since 2010.

•Patients' age, history, symptoms, number of pads and ICIQ-SF score were recorded before and after operation. In particular complications and post-operative storage symptoms were evaluated. Outcomes were evaluated with delta ICIQ-SF and PGI-I. Pain was evaluated with perioperative and post-operative VAS. All patients underwent previous radical prostatectomy (open, laparoscopic, robotic) with or without subsequent RT. Follow up was carried out at month 1, 6, 12 and then yearly. Appropriate descriptive statistical analysis was provided for every variable. Student's t-test was used to compare continuous variables and Fisher's Exact test for categorical values. Statistical significance was set at p=0,05. All statistical analysis were made with SPSS©.

Results

Patients enrolled were 54, 21 (38.9%) and 33 (61.1%) in each centre. Patients' characteristics are reported in Table 1. All patients were divided in 2 groups according to EBRT. Patients not submitted to EBRT were 37 (68.5%) and became Group 1. The other 17 (31.5%) patients underwent EBRT thus becoming Group 2. Groups were similar, without statistically significant differences between them. Median follow up was 43,0 months (IQR: 22,3-64,0). Globally, transobturator male sling placement proved to be a successful surgery with a statistically significant reduction of pads number and ICIQ-SF score (p<0,05), with a median delta pads 2 (IQR 1-3) and a median delta ICIQ-SF 10 (IQR 5-12). At last follow up 21 (38.9%) patients were continent with 9 patients (16,1%) reported to use a pad daily, just as a precaution measure and 12 (21,4%) were without pads. Median PGI-I was 2 (IQR 2-3). Recorded complications were 8 (14,3%) and none exceeded Clavien Dindo 2. Two patients had temporary need for clean intermittent self-catheterizations, but it spontaneously resolved in both cases before month 3 after surgery. When we compared outcomes and complications rate between groups, we found no statistically significant difference, in particular for voiding symptoms and complications rates. Results are reassumed in Table 2. Three patients needed to place an AUS at long term follow up because they had no improvement after sling placement.

Discussion

Transobturator male sling surgery is a minimally invasive, safe thus effective technique to improve continence in patients submitted to previous prostate surgery.

In our experience EBRT was not associated to an increase in complications rate, and did not significantly affected outcomes, that were similar even at long term follow up. Our data is supported from Bauer et al, that also reported that EBRT did not worsened male sling outcomes and complication rate [2]. However, evidences are not clearly assessed yet, as Wright et al found that transobturator sling outcomes after EBRT are inferior in the immediate post-operative time and seems to worsen with time, differently from what we reported in our experience [3].

The role of male transobturator slings after EBRT is not yet clearly defined, as definitive draft may not be taken, and a prudent approach should be advisable. In fact, our results may not be reproducible in all centres, as there are limitations in our study like the small sample number. Furthermore, surgeon experience may also have a role in the outcomes, thus reducing study reproducibility.

TABLE 1	Radiotherapy	
	No (n=37)	Yes (n=17)
Age, years Median (IQR)	71 (65-76)	69 (67-75)
Pad, n, Median (IQR)	3 (2-4)	3 (3-4)
ICIQ-SF, score, Median (IQR)	15 (14-18)	15 (15-18)
Previous Radical Prostatectomy, n (%)	37 (100%)	17 (100%)

TABLE 3	Pre SLING	Post SLING	p
PPD (IQR)	3 (2-4)	1 (0-2)	0.001
ICIQ-SF score (IQR)	15 (14-18)	7 (2-11)	0.001

Conclusions

In our findings, patients with mild to moderate male SUI after radical prostatectomy with further EBRT submitted to transobturator sling placement have outcomes and safety profile similar to EBRT untreated patients.

TABLE 2		Radiotherapy		p
		No (n=37)	Yes (n=17)	
Peri-Operative Pain (VAS), mean (St. Dev)		2 (1)	2 (1)	>0,05
Last Follow-Up Pain (VAS), mean (St. Dev)		0 (0)	0 (0)	>0,05
Last Follow-Up Pad, n, mean (St. Dev)		1 (1)	1(1)	>0,05
Delta PAD, mean (St. Dev)		2 (1)	3 (2)	0.953
PGI-I, score, mean (St. Dev)		2 (1)	2 (1)	0.809
Last Follow-Up ICIQ-SF, score, Median (St. Dev)		8 (6)	6 (4)	>0,05
Delta ICIQ-SF, mean (St. Dev)		8 (6)	10 (4)	0.580
Storage LUTS, n (%)		1 (2,6%)	0 (0,0%)	0.409
Complications, n (%)	Any Kind, n (%)	4 (10,5%)	5 (27,8%)	0.076
	Haematoma, n (%)	1 (2,6%)	3 (16,7%)	
	AUR, n (%)	2 (5,2%)	1 (5,5%)	
	Pain, n (%)	1 (2,6%)	0 (0,0%)	
	UTIs, n (%)	0 (0,0%)	1 (5,5%)	

References

*1. Systematic review of surgical treatment of post radical prostatectomy stress urinary incontinence. Neurourol. Urodyn. 2016; **35**: 875–881.*
*2. Results of the AdVance transobturator male sling after radical prostatectomy and adjuvant radiotherapy. Urology 2011; **77**: 474–480.*
*3. Transobturator sling for post-prostatectomy incontinence: radiation's effect on efficacy/satisfaction. Can. J. Urol. 2017; **24**: 8998–9002.*

.