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Linbecker M[1], Pottek T[2]
1. *Bundeswehrkrankenhaus Hamburg,* ***2.*** *Urologisches Zentrum Wedel*

A TWO CENTER EXPERIENCE WITH THE TRANSOBTURATORY MALE SLING SYSTEM IN PATIENTS WITH URINARY INCONTINENCE FOLLOWING RADICAL PROSTATECTOMY, EARLY AND MIDTIME RESULTS OF 171 PATIENTS.

Hypothesis / aims of study

Incontinence following radical prostatectomy (RP) is a problem for at average 5 % of patients undergoing surgery for prostate cancer [1]. The continuously rising number of patients having RP will probably enlarge the number of patients needing further treatment for postprostatectomy incontinence (PPI). Since Bradley Scott implanted the first artificial sphincter prosthesis in 1973 it has become the golden standard in operative treatment of these patients[2].

Several sling systems have been proposing good postoperative continence rates, urodynamic results and long term outcome[3,4]. Concerning the bone anchored systems, perineal paresthesia and pain in up to 52% has been reported [5].

Due to its dorsal approach transobturator sling system proposed not to result in obstruction or bone related sensations. We started in 2007 with the male transobturator sling and report our early and midtime results of 171 patients.

Study design, materials and methods

Between April 2007 and January 2009 171 consecutive patients underwent the transobturatory sling procedure at two implantation centers. All of them presented with stress urinary incontinence (SUI) following RP. 168 patients had undergone retropubic radical prostatectomy (RRP) and 3 laparoscopic radical prostatectomy (LRP). Preoperative assessment included patients history, examination, pad test, uroflowmetry with residual urine measurement and urethrocystoscopy with digital perineal elevation test. All patients underwent a pre- and postoperative pressure/flow study to rule out bladder outlet obstruction or instable detrusor and postoperative changes.

Results

Preoperative parameters: median preoperative pad use was 6 pads/day (range 2-12), postprostatectomy interval was 7-32 months (median 14), average maximum flow rate (Qmax) and maximum RLPP was 28ml/sec and 14 cm/H²O respectively. All of the patients had pure SUI, no residual urine.

Perioperative parameters: median operation time was 36 minutes, stay of catheter 1 day in all of the patients and there was no markable blood loss. We have recognized only 3 major complications: 2 severe wound infections with need for intervention and one fourniers gangrene, but no intraoperative perforation nor urethral arrosion. 4 patients presented with smaller perineal hematoma (no need for intervention), 6 patients had postoperative residual urine of 100 - 150ml that reduced to 0ml within 14 days and 6 patients were treated for 3-4 weeks with trospiumchloride due to passager urgency.

Postoperative results: In the early FU of 2-4 months 118 pats. have become dry (69%), 10 pats. (6%) have been improved (pad use </=2 pads per day) and 79% of pats. have been content with the result in that intervall over all. In the medium time FU of 12 to 24 months 102 pats. remained dry and 68% stayed content, 3 pats recognized a painless laceration of the sling under maximum tension by lifting heavy load from the squat and complained about recurrence of incontinence after that incident (within 3 months from implantation). 7 pats. (4%) with a median pad use of 7 pads per day (7-12) did not show any effect on incontinence with the sling. Average residual urine and maximum flow rate did not change pre- and postoperatively: residual urine 30 vs 42 ml (pre vs post operation) and Qmax 28 vs 17ml/sec. (pre vs post operation). Postoperative pressure/flow studies revealed no obstruction according to Abrams/Griffiths. Concerning quality of life 79% (2-4 months) and 68% (>12 months) of patients are satisfied with the result.

Interpretation of results

In our two center series of transobturator sling for patients with postprostatectomy SUI, we can confirm the results of other groups. We recognized the 7 patients failing improvement by the sling had the highest pad use of all patients with 7 - 12 pads per day preoperative respectively. We presume, that there could be a cut off between 5 and 8 pads per day above that a sling implantation will not be successful.

Concluding message

The male transobturator sling system represents a minimal invasive and save procedure with promising early results. To our experience it is a proper system for mild and moderate SUI following RP with maximum pad use of 5 pads per day. Endoscopy should reveal an anatomicly circular intact sphincter externus with prompt reagibility on perineal digital pressure test, this effect should be reproduced under endoscopic guidance intraoperatively to find the correct position of the sling fixation to the urethral bulbus, to prevent early disposition of the sling the fixation to the bulbus should bee done with prolene better than reabsorbable suture material and pats should abstain from deep squat movements for three months at least. In our opinion the transobturatory sling is a save and minimal invasive treatment option for adequate pats. but the artificial sphincter prosthesis remains the golden standard treatment for severe postprostatectomy incontinence.

References

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Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require eithics committee approval because	**This is to evaluate the results of a FDA approved sling system in two centers pats.**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**