

BONE-ANCHORED PUBO-VAGINAL SLING AND TENSION FREE VAGINAL TAPE IN FEMALE STRESS URINARY INCONTINENCE: MEDIUM TERM CLINICAL AND URODYNAMIC OUTCOMES COMPARISON

Aims of Study

In the last years many different surgical techniques have been proposed and reported in Literature for the treatment of stress urinary incontinence (IUS) secondary to urethral hypermobility. All these procedures have been developed with the aim to achieve good anatomic and functional outcomes with mini-invasiveness and low incidence of peri and post-operative complications. Aim of this study was to compare the medium term efficacy and safety of two different surgical techniques (free-tension vaginal slings) utilized in female pts affected by IUS due to urethral hypermobility combined or not with cystocele (I and II ICS genital prolapse stage). Clinical and urodynamic data were assessed at baseline and after 12 months after the surgical procedure.

Methods

90 female pts (mean age 63,45+/-13,55 years) affected by IUS were enrolled in the study after informed consent was signed, and evaluated, preoperatively and 12 months after the operation, by means of King's Health King Questionnaire, physical examination, blood and urine examination, short provocative pad-test and digital videourodynamic comprehensive of stress test and Valsalva Leak Point Pressure determination. 70 pts were submitted to the In-Fast bone anchor sling procedure (group A), while 20 pts underwent the TVT technique (group B). The study was approved by the Local Ethical Committee.

Results

The results regarding the mean operative time and mean hospital stay, complication rate and continence achievement are reported in Table 1.

Urodynamic outcomes are described in Table 2.

	Mean hospital staying (days)	Operative time (minutes)	Early complications (n° pts)	Medium term complications (n° pts)	12 months continence
Group A (In-Fast)	3.1	45	1: intraoperative bleeding. 1: short term urinary retention 9: significant post-voiding residue	1: pubic periosteitis and dispareunia 2: sling infection and surgical removal	66/70(95%)
Group B (TVT)	2.2	39	1: short term urinary retention		19/20 (95%)

	Qmax pre (ml/sec)	Qmax post (ml/sec)	CC max Pre (ml)	CC max Post (ml)	Pdet/Qmax pre	Pdet/Qmax post
<u>Group A</u>	23,9±10,8	17,6±5,9	315±42	350±45	27,3±17,5	41,3±12,3
<u>Group B</u>	33,7±24	18,3±7	344±120	356±150	21,7±15	29,2±10
T test	P=0,0016	P=0,0016	P=0,2	P=0,2	P=0,0018	P=0,0019

Conclusions

TVT procedure needed shorter operative time (39 min vs 45 min) and shorter hospital stay (2,2 days vs 3,1). Moreover the urodynamic outcomes showed better micturition performances in the group of pts submitted to the TVT procedure with post-operative lower decrease of flow max (Qmax) a lower increase of detrusorial pressure at flow max (PdetQmax). Regarding the symptomatic evaluation, both groups of pts reported a significant improvement of symptoms of the quality of life. Good compliance was reported by the pts for both the procedures.

Regarding the complications: the pt who had significant intraoperative bleeding was treated with homologous transfusion; pt with pubic periosteitis and dispareunia was successfully cured by local magnetotherapy; pts with urinary retention or significant post-voiding residue underwent temporary self intermittent catheterization and spontaneously re-acquired their physiologic and complete bladder emptying within 1 month. The prosthesis removal was simply achieved in the 2 pts submitted to In-Fast bone-anchored sling, who needed the sling removal due to infection. Only 1 pt needed a re-intervention (Burch laparoscopic procedure) due to incontinence recurrence.

Our pts series confirm the data in Literature regarding efficacy and safety of these two mini-invasive procedures in the treatment of IUS. We obtained an high percentage of 12 months continence with a low incidence of peri and postoperative complications (particularly in TVT group of pts). Moreover both the procedures require short learning curve for the surgeons and low costs due to the short operative time and hospital stay, making them even more attractive in comparison to the traditional techniques.

References

1. Leuret T, Lugagne PM, Hervé JM, et al: Evaluation of Tension-Free Vaginal Tape Procedure. Eur Urol 40:543-547, 2001.
2. Appell RA: The use of bone anchoring in the surgical management of female stress urinary incontinence. World J Urol 15(5):300-5, 1997.