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SYMPTOMS AND URODYNAMIC FEATURES AFTER SURGERY FOR PELVIC ORGAN PROLAPSE ASSOCIATED WITH URINARY INCONTINENCE: PRELIMINARY DATA ON AN INTEGRATED APPROACH

Hypothesis / Aims of Study

Our objective was to evaluate patients with pelvic organ prolapse (POP) associated with stress urinary incontinence (SUI) both clinically and with urodynamics after performing a trans-vaginal tape (TVT) concurrently with Tension-free Cystocele Repair (TCR) using mesh and Levator Myorraphy.

Study Design, Materials and Methods

52 consecutive patients with symptomatic ≥ stage II cystocele and stress/mixed incontinence underwent a full urogynaecological work-up including vaginal profile sec. Baden and Walker, and multichannel cystometry with Pressure/Flow study (after reduction of the prolapse). All patients underwent a Trans Vaginal Tape (TVT) procedure[i], followed by a Tension-free Cystocele Repair (TCR) using a Prolene mesh under the bladder with two lateral wings of the mesh inserted at the level of the urethropelvic ligaments. Suspension of central segment is achieved by Levator Myorraphy placing a 2/0 Vicryl suture at the level of uterosacral ligaments (or vaginal vault), puborectal muscles bilaterally and apex of prerectal fascia. The tension of the TVT is regulated at the end of the operation.

30 patients (57.6%) were available for postoperative pelvic examinations, mean follow-up 13 months (range 6-30). Surgical results were documented using a symptoms questionnaire, assessment of vaginal profile by a third party interviewer, supine stress test and postoperative multichannel cystometry. Subjective assessment of cure rate for incontinence (cured = no incontinence; improved = occasional incontinence or less severe incontinence; failed = no change or worsening of incontinence) and anterior vaginal wall segment repair (cured = good anterior vaginal wall support, improved = asymptomatic stage I-II cystocele and failed =stage III-IV cystocele) were evaluated.

The presence of obstruction was evaluated using Blaivas Groutz normogram [2].

Statistical analysis

We used chi square test, exact Fisher test, Mann-Whitney test

Results

Mean age was 56.9 years (36 – 71), mean parity was 2, 24 patients (80.0%) were post-menopausal, and 6 patients (20%) had a history of previous urogynaecological surgery and/or hysterectomy .

25 patients (83.3%) presented with cystocele ≥ stage II, 23 (76.6%) with urethrocele ≥ stage II, 6 (20%) with hysterocele ≥ stage II, 2 with cul de sac ≥ stage II (6.6%)and 8 with rectoceles ≥ stage II (26.6%). Q tip test was > 40° in 26 patients (86.6%). 12 patients (40.0%) had obstructive symptoms, 21 patients (70.0%) had irritative symptoms, 16 (53.3%) complained of urge incontinence. 5 patients (16.6%) had pelvic pain, 6 (20%) had dyspareunia and 9 (30%) were constipated.

Preoperatively, stress test was positive and SUI was confirmed urodynamically in all patients. 16 patients (53.3%) referred to incontinence ≥ grade 2 and 8 patients (26.6%) to mixed incontinence. Pre-operative pressure/flow study showed mild to moderate obstruction in 10 patients.

Postoperatively all but 4 patients were cured of cystocele giving a 86.6% overall cure rate (Tab.1). In 3 patients there was an asymptomatic recurrent stage II cystocele, in 1 patient with stage II cystocele there was no change. 1 patient presented with hysterocele and 1 patient with rectocele a stage II . No patients had cul de sac >1.

Stress test was negative in 100% of patients. In 27 patients incontinence was subjectively cured, in 3 patients was improved, one of which was mixed. Irritative and obstructive symptoms significantly decreased (P= 0.02; P = 0.01). New onset detrusor overactivity was not observed. There were new onset obstructive symptoms in 3 patients, urge incontinence in 1 patient, pelvic pain in 2, dyspareunia in 5 and 2 new cases of constipation.

At post-op pressure/flow study 4 patients were no longer obstructed, 6 were unchanged and 6 had new onset mild obstruction.
1 patient underwent removal of the TVT and remained continent without obstructive symptoms.

Interpretation of Results

Correction of prolapse combined with TVT showed an good correction of SUI associated with prolapse. The application of a "tension free" mesh accounts for the good repair of the anterior segment. Approximating the apical segment of the vagina to the levator ani muscles determines the correction of the anatomical defect and maintains the vaginal axis, avoiding alteration of the posterior segment wich could result in posterior prolapse.

Concluding Message

Our preliminary results are promising and confirm the potential of this combined prosthetic approach.

Table 1

Patients subdivided according to pre e post surgical outcome

	basal	follow up	*p*
Grade > 2°	16 (53,3%)	0	0,000
Supine Stress Test	30 (100%)	0	0,000
Irritative Symptoms	21 (70,0%)	11 (36,6%)	0,02
Obstructive Symptoms	12 (40,0%)	6 (20,0%)	0,01
pelvic pain	5 (16,6%)	1 (3,3%)	NS
dyspareunia	6 (20,0%)	1 (3,3%)	NS
constipation	9 (30,0%)	5 (16,6%)	NS
Q - tip>40°	26 (86,6%)	5 (16,6%)	0,000
cystocele > grade 2	25 (83,3%)	4 (13,3%)	0,000
Cap. cistom. max	418	432	NS
Overactive bladder	8 (226,6%)	2 (6,6%)	NS
P/F study	8(26,6%)	6(20,0%)	NS

References

[1] An ambulatory surgical procedure under local anesthesia for treatment of female urinary incontinence. Int Urogynecol J Pelvic Floor Dysfunct. 1996;7(2):81-5; discussion 85-6.
[2] Detrusor pressure uroflowmetry studies in women: effect of a 7Fr transurethral catheter. J Urol 2000, 164: 109.