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"TENSION FREE" PROCEDURE FOR TREATMENT STRESS INCONTINENT WOMEN USE IVS ANTERIOR (INTRAVAGINAL SLINGPLASTY)

Hypothesis / aims of study

"Tension free" procedure for surgical treatment of female stress incontinence is based on urethral closure mechanisms in female according to which the female urethra is closed off in its midportion. Lack of support from the pubourethral ligaments, from the suburethral anterior vaginal wall, with utilizing polypropylene mesh tape reinforced above mentioned structures, and that procedure differs significantly from conventional sling plasties. IVS (Intravaginal Slingplasty) has been built on very relevant anatomic and physiopathologic data. The purpose of this prospective study was to evaluate the safety and the efficacy of a new surgical procedure to correct female incontinence.

Study design, materials and methods

The study population consisted of 31 consecutive stress incontinent patients who were enrolled into a prospective short-term follow up, mean age 51 years (range 42-72), mean parity 2.2 (range 1-4). The study preoperative protocol included: history, urine analyses, gynecologic examination, provocative stress test, 1-hour pad test, urodynamics, perineal echosonography for mobility of the bladder neck and quality of life (QoL) was assessed. This study included 25 patients with associated uterine or ovarian pathology, were treated with LAVH (Laparoscopically Assisted Vaginal Hysterectomy). In short term follow up one year study with IVS procedure, patients were postoperatively: stress tested, 1-hour pad tested, with abdominal echosonography rest urine measured, evaluated retropubic space for hematomas by perineal echosonography, movement of bladder neck and location of polypropylene IVS tape.

IVS "tension free" procedure was carried out with IVS Tunneller (Tyco, Healthcare, USA), with spinal anaesthesia or general for concomitant LAVH, placed multifilament polypropylene tape, suburethraly. The IVS procedure was carried out as described in detail by author P.Petros. A catheter was left in the bladder for 12 hours, all postmenopausal patients were treated with local estrogen therapy, one month later.

Criteria for cure: postoperatively, the patients were regarded as cure if they had a negative stress test results, a negative 1-hour pad test, confirmed urodynamically and if the QoL had improved > 90%.

Complications were classified as major, which were potentially life threatening and all other as minor.

For statistics, student t-test was used.

Results

All patients in our study, preoperative complain on stress incontinence, demonstrated urine leakage during provocative test, positive pad test, which was confirmed urodynamically. 31 (100%) patients had echosonography hypermobile bladder neck. IVS operative time was 35±12 minutes, intraoperative bleeding 73±26 ml occurred, no bladder perforation found by cystoscopy, without post operative pain. Evaluation of IVS procedure were obtained the second day by echosonography measurement of the rest urine and assessed retropubic hematomas. None of them had initial postoperative voiding difficulties, the rest urine was < 50 ml, no recognized retropubic hematomas within two days hospital stay. One week later, as out patient, by echosonography controlled IVS tape placement, the bladder neck mobility (β angle = 44-57°), the rest urine measured (mean 32 ml). Next follow up were performed 1 month later, at all patients no sign of defective wound healing, no tape rejection, all had negative provocative test and negative pad tests, echosonography mobility of the bladder neck (β angle = 23-49°), rest urinae (mean 27 ml). QoL had improved at 95% of the patients. The same results were found 6 and 12 months later.

Interpretation of results

The colposuspension procedure, which present in one of the most effective incontinence operations, as “gold standard”, is associated with abdominal incision, laparotomy, voiding disorders, “de novo” detrusor urge symptoms, urogenital prolapse. The results presented above suggest that the IVS operation is associated with success rates comparable with those of the more effective and invasive procedures such as the colposuspension. On the other hand the complication rates associated with IVS are even less than those found with other minimally invasive operations.

Concluding message

Our initial results with IVS “tension free” surgical procedure for treatment of the urinary stress incontinence, are the same at all recent published studies. Per and post operative avoided complications, good subjective and objective parameters, show to continue our study, include more patients and longer follow up to present effect of this minimally invasive method. In term of efficacy with this procedure are: shorter operative time, use regional anaesthesia, lower levels of post operative patient catheterization, shorter delays until the resumption of spontaneous voiding, small per and post operative complications, decreased morbidity, faster convalescence by short hospital stay and resumption of usual activities at home and employment.