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ASSESSMENT OF IVS METHOD IN TREATMENT OF STRESS URINARY INCONTINENCE (SUI) IN WOMEN - 3 YEARS FOLLOW-UP

Hypothesis / aims of study

Stress urinary incontinence (SUI) develops as a result of downward displacement of the bladder neck and urethra due to flaccidity of the supporting tissues and intrinsic urethral sphincteric deficiency. Childbirth, overweight, hormonal deficiencies, decreased content of collagen, especially of type I and III and too low collagen I to collagen III ratio, as well as weakening of the pubourethral fascia, are the contributing factors. Among the numerous methods of treatment used in SUI according to the stage of the disease, procedures involving suspension of the urethra are the most frequent ones. The currently used methods include suspension of the urethra or bladder neck from the transvaginal and retropublic approach, as well as sling type suspension procedures. The aim of the study was to assess the effectiveness of urethral suspension procedures utilizing self-supporting prolene tape in treatment of stress urinary incontinence in women. IVS tape by Tyco Healthcare was used in the procedures.

Study design, materials and methods

From October 2001 to November 2003, 82 urethral suspension procedures with IVS tape treating urinary incontinence in women were performed in the Department. The patients' age ranged from 36 to 81, with the mean of 62 years. The diagnosis of SUI was established on the basis of anamnesis – questionnaire, gynecological examination, urinary tract ultrasound, urodynamic examination. On the basis of the above examinations, the patients were divided into 3 groups:Group I with primary SUI – 46(56.1%) women, group II with recurrent SUI - 20(24.3%), group III with mixed type UI (urge + stress) - 16(19.5%). Pre-operative assessment of the patients included also BMI and posterior vesico-urethral angle by transvaginal ultrasound Obese patients constituted as many as 53.3% of the group, overweight – 33.3%, and only 13.3% had normal weight. The posterior vesico-urethral angle ranged from 118^{o} to 146^{o}, with the mean value of 127^{o}. The number of past deliveries in surgically treated patients ranged from 0 to 6 (mean 2.5).

The surgical method utilizing IVS involves suspension of the proximal urethral segment by means of flexible self-supporting prolene tape, inserted with a special guiding needle transvaginally, behind the pubic symphysis, through the pelvic peritoneum, retropubic space, through the layers outwards to the skin. After cystoscopy and checking the integrity of bladder walls, the tape is left in place and its ends are cut off below the skin surface. During the post-operative period, connective tissue growing into the tape forms a natural support for the urethra. The average duration of this low-invasive procedure is ca. 20 min., and of hospitalization 2 days. The patients were followed up post-operatively for 3 to 36 months.

Results

The procedure was well-tolerated by all patients, with no significant intra- or post-operative complications observed. Only in five /6.1%/cases, the urinary bladder was injured while the needle guiding the tape was being inserted behind the pubic symphysis, which required placement of the Foley's catheter for a few days and prolonged the period of hospitalization. This occurred in patients previously treated surgically for SUI via retropubic approach. In two of them, the procedure was repeated, and in one the method was abandoned because of previous RTG-therapy. The above complications occurred during the initial period of gaining experience with the IVS method.

Interpretation of results

High effectiveness of the method was observed post-operatively. The period of follow-up has been relatively short. Complete cure was obtained in 69 patients (84%), improvement in 13(16%). No urine retention after micturition was observed, and the symptoms of urgency, which regressed completely or were reduced within 4 weeks after the procedure, were noted in 13 cases (15.8%).

Special attention should be paid to group II of the patients (recurrent incontinence), in which 100% cure rate was obtained in patients previously treated by gynaecologists with other (non-sling type) surgical methods. In group III (mixed type incontinence), the operated patients required additional administration of anticholinergic drugs because of urgency.

Concluding message

The obtained results allow to conclude that the IVS method is a low-invasive, relatively safe and effective procedure in the treatment of SUI, even in case of recurrences. Short period of hospitalization allows to reduce convalescence time and favors quicker recovery. However, objective assessment of the method would require a longer period of post-operative follow-up (5 years).