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Ku J[1], Kim S[1], Paick J[1], Oh S[1], Son H[1]
1. Department of Urology, Seoul National University Hospital,

TENSION FREE VAGINAL TAPE PROCEURE IN THE TREATMENT OF MIXED URINARY INCONTINENCE: SIGNIFICNACE OF MAXIMAL URETHRAL CLOSURE PRESSURE

Hypothesis / aims of study

We investigated factors predicting persistent urge incontinence after the tension free vaginal tape procedure in patients with mixed urinary incontinence.

Study design, materials and methods

Between March 1999 and May 2003, female patients with complaints of urinary incontinence were evaluated according to our protocol. After the tension free vaginal tape procedure, patients were followed up 1, 6 and 12 months and every 1 year thereafter. A total of 274 women (stress urinary incontinence; 201, mixed urinary incontinence; 73) with at least followup greater than 6 months included in the study. Cure of stress-induced incontinence after the procedure was defined as the absence of a subjective complaint of leakage and objective leakage on stress testing, and all other cases were considered failures.

Results

There was no significant difference of cure rate for stress-induced incontinence between patients with stress and mixed urinary incontinence. However, of 73 patients with mixed urinary incontinence, 12 (16.4%) had persistent urge incontinence. Thus, the overall cure rate was significantly higher in the stress incontinence group than in the mixed incontinence group (95.5% versus 78.1%, P <0.001) In multivariate analysis, maximal urethral closure pressure was associated with 0.9-fold risk of the persistent urge incontinence (odds ratio, 0.94; 95% confidence interval, 0.88-0.99; P = 0.030) after the procedure in patients with mixed urinary incontinence.

Interpretation of results

For patients with stress urinary incontinence, continence after the tension free vaginal tape procedure would be achieved because the proximal urethra would rotate and descend when under stress, while the mid urethra would be held in place by the tape. However, for patients with mixed urinary incontinence, the movement of the proximal part of the urethra does not contribute to achieve continence because urge-induced incontinence does not begin under the stress condition such as effort, exertion, sneezing or coughing. Thus, taken together, all these findings may suggest the following hypothesis. In patients with low maximal urethral closure pressure, the tension free vaginal tape procedure may be less successful to control urge incontinence compared to suspension or sling surgery since this surgery does not influence proximal urethra and not increase in urethral closure pressure although some researchers suggested that maximal urethral closure pressure may be changed postoperatively.

Concluding message

Our findings suggest that low maximal urethral closure pressure may be associated with the persistent urge incontinence after the tension free vaginal tape procedure in patients with mixed urinary incontinence.