

## ULTRASONOGRAPHIC AND URODYNAMIC COMPARISON OF TENSION-FREE VAGINAL TAPE AND TRANSOBTURATOR TAPE PROCEDURE FOR THE TREATMENT OF STRESS URINARY INCONTINENCE

### Hypothesis / aims of study

The purpose of this study was to compare tension-free vaginal tape (TVT) and the TVT-Obturator (TVTO) procedures.

### Study design, materials and methods

We reviewed eighty-two women with urodynamically proven stress incontinence undergoing either TVT (n=53) or TVTO (n=29) without concomitant surgery. All subjects received urinalyses, 1-hour pad tests, perineal ultrasonographies, urodynamic studies and validated Questionnaires before and one year after surgery.

### Results

Mean operative time was significantly shorter in the TVTO group ( $16.8 \pm 10.7$  min vs  $28.6 \pm 6.9$  min,  $P < 0.01$ ; Unpaired t-test). The subjective and objective cure rate were comparable for the TVT and TVTO groups ( $P = 0.085$  vs  $0.19$ , respectively; Fisher's exact test). At rest or during Valsalva, the middle of the TVTO tape localized more distally than that of TVT on ultrasound ( $P < 0.01$ ; Unpaired t-test). A higher rate of urethral kinking during straining was noted in the TVT group compared with the TVTO group after surgery (87% vs 25%,  $P < 0.01$ ;  $\chi^2$  test). Following TVT, maximum urethral closure pressure increased significantly ( $83.6 \pm 24.6$  cmH<sub>2</sub>O vs  $69.2 \pm 25.9$  cmH<sub>2</sub>O,  $P < 0.05$ ), but this was not the case in the TVTO group ( $67.8 \pm 15.0$  cmH<sub>2</sub>O vs  $63.2 \pm 12.3$  cmH<sub>2</sub>O,  $P > 0.05$ ; Paired t-test).

### Interpretation of results

With comparable cure rates, TVTO has the advantage over TVT with shorter operative time. However, the TVTO tape results in a lower rate of urethral kinking and less urethral compression.

### Concluding message

With comparable subjective and objective cure rates, TVTO has the advantages over TVT with shorter operative time. However, the TVTO tape is at a less of an acute angle and localizes to a more distal part of urethra, resulting in a lower rate of urethral kinking and less urethral compression.

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| <b><i>Is this a clinical trial?</i></b>                                      | <b>Yes</b>  |
| <b><i>Is this study registered in a public clinical trials registry?</i></b> | <b>Yes</b>  |
| <b><i>Specify Name of Public Registry, Registration Number</i></b>           | <b>KMHK-IRB: A95100546</b>  |
| <b><i>What were the subjects in the study?</i></b>                           | <b>HUMAN</b>  |
| <b><i>Was this study approved by an ethics committee?</i></b>                | <b>Yes</b>  |
| <b><i>Specify Name of Ethics Committee</i></b>                               | <b>IRB of Kaohsiung Municipal Hsiao-Kang Hospital</b>   |
| <b><i>Was the Declaration of Helsinki followed?</i></b>                      | <b>Yes</b>  |
| <b><i>Was informed consent obtained from the patients?</i></b>               | <b>Yes</b>  |