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TRANSOBURATOR TENSION FREE VAGINAL TAPE (TVT-O) IN WOMEN WITH STRESS URINARY INCONTINENCE. ULTRASONOGRAPHIC IMAGING OF THE EFFECT ON LOWER URINARY TRACT.

Hypothesis / aims of study

This study aims in evaluating ultrasonographic changes of lower urinary tract, such as urethral and bladder neck position and mobility after a Tension-free Vaginal Tape –Obturator (TVT-O) operation in women suffering from Stress Urinary Incontinence.

Study design, materials and methods

In this cross sectional study were enrolled 46 women with stress urinary incontinence (SUI) scheduled for suburethral sling operation divided into two groups. SUI was confirmed by urodynamic session. The control group consisted of 22 patients underwent transperineal ultrasound examination pre-operatively and the study group of 24 underwent a TVT-O operation. Two months after the operation their lower urinary tract was examined by transperineal ultrasound. Ultrasound assessment of the lower urinary tract was performed in accordance with the guidelines of the German Urogynecology Working group. The effect of TVT-O operation was assessed based on changes of urethral and bladder neck position and mobility, evaluated at rest and maximal Valsalva.

Results

The study showed that TVT-O operation decreased the mobility of all urethral parts during Valsalva. Medians of absolute differences between measurements at rest and at maximal Valsalva were higher at the control compared to the study group at all reference points. This indicated a tendency that urethral stability was higher in women that underwent TVT-O operation. At the level of the urethrovesical junction, the median of the absolute differences between measurements at rest and at maximal Valsalva decreased significantly from 4,75 at the control group to 1.4 at the study group 2 months after TVT-O procedure ($p < 0.05$). Furthermore, at the level of middle urethra the median of the absolute differences between measurements at rest and at maximal Valsalva decreased from 3.8 at the control group to 0.8 after TVT-O procedure. This difference was also found statistically significant ($p < 0.05$).

Interpretation of results

Concluding message

TVT-O procedure has a positive effect on lower urinary tract stability, especially on urethral and bladder neck. This operation reduces significantly the mobility at the level of middle urethra and at urethrovesical junction both at rest and during Valsalva procedure.

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What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**Aretaieion Hospital Scientific Commitee**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**