

## THE CHANGES OF VOIDING PATTERN AFTER MID-URETHRAL SLING OPERATION (TVT-S, TVT-O, T-SLING)

### Hypothesis / aims of study

The purpose of this study was to determine the changes of voiding pattern after mid-urethral sling according to the time. We also evaluated whether type of mid-urethral sling can be affected to early voiding pattern after operation.

### Study design, materials and methods

From March 2007 to February 2008, 196 women underwent a mid-urethral sling, TVT-s, TVT-o and T-sling in order of precedence. Sixteen were excluded from analysis because of pelvic organ prolapse, previous anti-incontinence operation, detrusor underactivity (<20cmH<sub>2</sub>O) and low flow rate (<15 cm/ml). The data from 180 women were collected. Sixty women were operated by TVT-s (group I), 62 were operated by TVT-o (group II) and 58 were operated by T-sling (group III). Multiple parameter including demographic data, type of surgical procedure (TVT-s, TVT-o & T-sling), IPSS questionnaire, post-operative pain score, uroflow and residual urine were analyzed at post-operative 1 week, 4 weeks, and 12 weeks.

### Results

Total IPSS scores were 7.3±2.1, 7.5±3.2, 8.2±3.3 in group I, II and III preoperatively, 13.7±7.5, 14.3±8.2, 14.2±7.2 at 1 week, 9.8±6.7, 12±6.1, 14±7.7 at 4 weeks, and 8.8±7.2, 11.4±7.3 and 13.3±6.4 at 12 weeks. The voiding sub-scores (1, 3, 5, 6) were 4.5±2.1, 5.2±3.0, 5.3±4.1 in group I, II and III preoperatively, 7.78±5.0, 9.85±6.0 and, 10.4±4.2 at 1 week, 6.6±4.8, 9.8±6.3 and, 9.7±5.2 at 4 weeks and 7.0±3.8, 8.5±4.9 and, 8.4±4.2 at 12 weeks.

Qmax were 21.54±15.46, 22.6±9.8 and 24.1±13.2 ml/sec in group I, II and III preoperatively, 21.3±7.4, 15.3±7.1 and 18.4±6.8 at 1 week, 23.7±8.5, 17.3±12.2 and 20.5±5.1 at 4 weeks, and 22.8±7.3, 19.2±11.2 and 20.8±5.4 at 4 weeks. Pain score were 3.3±0.9, 5.2±1.1, and 5.3±1.4 in group I, II and III on op. date, 2.2±0.7, 2.5±0.7 and 2.6±0.5 at 1 week, 1.0±0.2, 1.0±0.3 and 1.0±0.1 at 4 weeks, and 1.0±0.2, 1.0±0.3 and 1.0±0.1 at 12 weeks.

### Interpretation of results

Regardless of flow rate, the patients who complaint voiding difficulty, were 5% (3/60), 14.5% (9/62) and 20.6% (12/58) in group I, II and III at 12 weeks. Early postoperative voiding difficulty, which sound dilation was needed, occurred in 4.4% (8/180) of women, 1.6% (1/60) in group I, 4.8% (3/62) in group II and 6.8% (4/58) in group III.

### Concluding message

There was a tendency of decreasing flow rate and increasing IPSS score after mid-urethral sling. 13.3% (24/180) of mid-urethral sling patients still complaint voiding difficulty with or without low flow rate. TVT-s may minimally affect the early voiding dysfunction, but in the other hands, we have to watch over the long term success rate.

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<b><i>Is this a clinical trial?</i></b>	<b>No</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>No</b>
<b><i>This study did not require ethics committee approval because</i></b>	<b>retrospective analysis</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>