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CHANGE IN VOIDING PATTERN ACCORDING TO THE TYPE OF ANESTHESIA AFTER MID-URETHRAL SLING

Hypothesis / aims of study
The aim of the study was to assess the changes in voiding pattern after mid-urethral sling procedure (TOT) according to the time and to investigate whethertype of anesthesia affect voiding dysfunction. We also compared the postoperative results achieved with TOTperformed under general endotracheal anesthesia (GA) versus spinal anesthesia (SA).

Study design, materials and methods
From January 2012 to February 2013, 35 women underwent TOT procedure. Seven were excluded from analysis because of pelvic organ prolapse, previous anti-incontinence surgery, and detrusor underactivity (<20cmH_20).Fifteen women were operated under GA (group I), thirteen women were operated under SA (group II). Multi-parameters including demographic data, type of anesthesia, IPSS questionnaire, post-operative pain score, uroflow and residual urine were analyzed at post-operative5 hours, 1 day, 1 week, and 4 weeks. Normal voiding was classified as a postvoid residual < 100 ml. Residual urine was measured in ratio compared to preoperative maximal cystometric capacity. Comparison of the variables was made using a RM-ANOVA model.

Results
Total IPSS scores were 7.3±2.3& 7.5±3.1 in group I and II preoperatively, 14.2±8.4& 14.1±6.2 at 1 week, and 12±6.1& 13.1±4.6 at 4 weeks. The voiding sub-scores (1, 3, 5, 6) were 5.2±2.9& 5.3±3.8 in group I and II preoperatively, 9.8±6.2 and, 10.4±3.9 at 1 week, and 9.8±5.9 and, 9.6±4.8 at 4 weeks. Pain score were 5.1±1.1 and 5.2±1.3 in group I and II on op. date, 2.5±0.7 and 2.6±0.6 at 1 day, 1.1±0.4 and 1.1±0.2 at 1 week, and 1±0.2 and 1±0.1 at 4 weeks. Qmax were 31.2±12.9 and 25.6±4.6 ml/sec in group I, and II preoperatively, 13.6±12.6 and 11.4±8 at 4 hours, 17.5±11.6 and 17.1±48.6 at 1 day,19.8±10.4 and 22.1±12.9 at 1 weeks, and 22.2±13.8 and 17.8±49.8 at 4 weeks. Residual urine were 10.6±10.4 and 7.5±6.4% of preoperative maximal cystometric capacity in group I, and II preoperatively, 38.2±30.9 and 34.8±51.8 at 4 hours, 30.3±32.4 and 26.5±48.1 at 1 day, 29.7±49 and 28.3±47.8at 1 weeks, and 14.2±11.6 and 27.3±50.4 at 4 weeks. Age, preoperative VLPP, MUCP, maximal capacities were not associated with an increased risk of voiding dysfunction. Group 2 had a tendency to decrease Qmax, but statistically non-significant. Post-void residuals were not restored in group 2 at postoperative 4 weeks compare to group 1 and statistically significant ($p<0.05$).

Interpretation of results
Regardless of flow rate, the patients who complaint voiding difficulties were 13.3% (2/15) and, 30.8% (4/13) in group I, and II at 4 weeks. Early postoperative voiding difficulty, which urethral catheterization was needed, occurred in 21.4% (6/28) of women, 13.3% (2/15) in group I and 30.8% (4/13) in group II. Spinal anesthesia is a risk factor for delayed recovery of residual decrement following TOT procedure.

Concluding message
This study demonstrates that spinal anesthesiais associated with an increased postoperative residual volume.The TOT procedure performed using general anesthesia was associated with a lower incidence of urethral catheterization.Long-term followup studies are now required.

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