DOES LAPAROSCOPIC EXTRAPERITONEAL INGUINAL HERNIOPLASTY IMPAIR POSTOPERATIVE VOIDING FUNCTIONS?

Hypothesis / aims of study
Voiding difficulties, especially urinary retention that necessitates catheterization after herniorrhaphy were a well known, but the impact of laparoscopic totally extraperitoneal inguinal hernioplasty (TEP) on postoperative voiding functions has not been clear. The purpose of this study was to evaluate the impact of TEP on postoperative voiding functions.

Study design, materials and methods
A total 30 patients performed TEP were included in the study. We performed uroflowmetry, and International Prostate Symptom Score (IPSS) / Quality of Life (QOL) questionnaire on preoperative and first postoperative day. The evaluated uroflowmetry parameters were maximum flow rate, total voiding time, total voiding volume, and postvoiding residual urine volume. Postvoiding residual urine volume was measured by ultrasound. All patients were not performed postoperative drainage of the urinary bladder. A paired t-test was used to compare the variables of uroflowmetry, and IPSS / QOL score on preoperative and first postoperative day.

Results
The mean age of patients was 63.0 (range 33 – 88). The overall incidence of urinary retention following TEP was 3.3% (n = 1). There were significantly decreases of maximum flow rate, and postvoiding residual urine volume (p = 0.002, 0.011). There were no significantly changes of total voiding time, and total voiding volume (p = 0.117, 0.098). There were significantly aggravations of IPSS and QOL scores (p = 0.002, 0.000).

Interpretation of results
TEP was associated with significant deteriorations in some uroflowmetry parameters and IPSS/QOL scores.

Concluding message
TEP has influence on postoperative voiding function.

Table 1. Comparison of preoperative and postoperative uroflowmetry parameters and International Prostate Symptom Score / Quality of Life score in 30 patients who underwent laparoscopic extraperitoneal inguinal hernioplasty

<table>
<thead>
<tr>
<th></th>
<th>Preoperative</th>
<th>Postoperative</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum flow rate (ml/min)</td>
<td>13.3 ± 5.4</td>
<td>10.8 ± 5.8</td>
<td>0.002</td>
</tr>
<tr>
<td>Total voiding time (sec)</td>
<td>22.6 ± 8.4</td>
<td>26.2 ± 11.1</td>
<td>0.117</td>
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<tr>
<td>Total voiding volume (ml)</td>
<td>202.0 ± 90.1</td>
<td>178.3 ± 100.4</td>
<td>0.098</td>
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<tr>
<td>Postvoiding residual urine volume (ml)</td>
<td>21.2 ± 22.8</td>
<td>59.5 ± 83.7</td>
<td>0.011</td>
</tr>
<tr>
<td>International Prostate Symptom Score</td>
<td>9.9 ± 5.2</td>
<td>13.1 ± 6.8</td>
<td>0.002</td>
</tr>
<tr>
<td>Quality of Life score</td>
<td>2.5 ± 1.0</td>
<td>3.5 ± 1.0</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Specify source of funding or grant
None

Is this a clinical trial?
No

What were the subjects in the study?
HUMAN

Was this study approved by an ethics committee?
No

This study did not require ethics committee approval because
retrospective study based on medical data.

Was the Declaration of Helsinki followed?
Yes

Was informed consent obtained from the patients?
No