Laparoscopic hernia repair reduced recovery time and days of postoperative analgesia use better than Shouldice repair


QUESTION: In men with a primary unilateral hernia, is laparoscopic repair better than Shouldice repair for shortening recovery time without increasing the complication and recurrence rates?

Design
Randomised (allocation concealed†), unblinded,* controlled trial with a median follow-up of 12 months.

Setting
The surgical department of a district hospital in Nyborg, Denmark.

Patients
287 men who were 18–75 years of age, had a primary unilateral hernia, and were referred for elective surgery. Exclusion criteria were irreducible hernias and unfitness for general anaesthesia. 268 patients (93%, median age 48 y) were assessed at 1 month; follow-up at 24 months was 91%.

Intervention
Patients were allocated to transabdominal preperitoneal laparoscopic repair (n = 146) or open hernia repair (n = 141). In the laparoscopic group, a 10-cm × 15-cm polypropylene mesh widely overlapped the defect and was fixed with staples to the Cooper ligament and anteriorly to the abdominal wall. Conventional repair was done under general or spinal anaesthesia and consisted either of a modified Shouldice technique or a sutured polypropylene mesh widely overlapped the defect and used postoperative analgesia for a shorter period (median 2.1 d, p < 0.005) and used postoperative analgesia and led to rates of complication and recurrence similar to those of Shouldice repair.

Main outcome measures
Complications, recurrences, length of recovery period, and postoperative pain.

Main results
Groups did not differ for recurrence or complication rates (table). Men in the laparoscopic group returned to complete normal activities sooner (median 13 d, p < 0.02) than did those in the conventional-repair group.

Conclusion
In men with a primary unilateral hernia, laparoscopic repair shortened recovery time and days of postoperative analgesia use and led to rates of complication and recurrence similar to those of Shouldice repair.

* See glossary.

OUTCOMES LAPAROSCOPIC SHOULDICE RRI (95% CI) NNH

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Laparoscopic</th>
<th>Shouldice</th>
<th>RRI (95% CI)</th>
<th>NNH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recurrence</td>
<td>3%</td>
<td>2%</td>
<td>26% (68–394)</td>
<td>Not significant</td>
</tr>
<tr>
<td>Wound abscess</td>
<td>1%</td>
<td>0%</td>
<td>Infinity</td>
<td>Not significant</td>
</tr>
<tr>
<td>Symptomatic haematoma</td>
<td>0%</td>
<td>2%</td>
<td>100% (80–100)</td>
<td>Not significant</td>
</tr>
<tr>
<td>Testis atrophy</td>
<td>0%</td>
<td>1%</td>
<td>100% (260–100)</td>
<td>Not significant</td>
</tr>
<tr>
<td>Pain for &gt;1 month</td>
<td>7%</td>
<td>9%</td>
<td>21% (72–64)</td>
<td>Not significant</td>
</tr>
</tbody>
</table>

Laparoscopic repair v Shouldice repair for primary unilateral inguinal hernias at median follow-up of 12 months†

†Abbreviations defined in glossary; RRR, RRI, NNT, NNH, and CI calculated from data in article.