Update On The Value Of Laparoscopy And Robotic Techniques In Vascular Surgery: Will They Be Widely Applicable And Beneficial

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Disclosures

• Consulting Medtronic, Inc.
• Intellectual property, Cook, Inc.

Any place for open surgery?

- Man, 69 yo
- Abdominal pain
- BP 80/40
- Visible pulsatile mass

Any place for open surgery?
An overview of laparoscopic techniques in abdominal aortic aneurysm repair

J. Vasc Surg 2013
- Total Laparoscopic
- Laparoscopy assisted
- Hand assisted laparoscopy
- Retroperitoneal/intraperitoneal
- Retro/ante colic Retro/ante renal
- Robot assisted

### What's New in Laparoscopic Aortic Surgery?

#### LAPAROSCOPIC VASCULAR SURGERY: A SYSTEMATIC REVIEW

**D. Noo**, J. Diks, W.A. Benschop, W. Wisselink and D.A. Legeman

1 Department of Surgery, Sauerland University Hospital, Germany.
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For J Vasc Endovasc Surg 33, 263-273 (2007)

- Clamp time determines outcome

#### Table 1. Anomalous repair. Operative data of included studies

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>Operative time (min)</th>
<th>Clamping time (min)</th>
<th>Anomalous site (mm)</th>
<th>Hospital stay (days)</th>
<th>Mortality (%)</th>
<th>Conversion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>10</td>
<td>120-140</td>
<td>90-120</td>
<td>140-160</td>
<td>7-14</td>
<td>2/10</td>
<td>1/10</td>
</tr>
<tr>
<td>2001</td>
<td>20</td>
<td>130-160</td>
<td>100-130</td>
<td>140-160</td>
<td>7-14</td>
<td>3/10</td>
<td>1/10</td>
</tr>
<tr>
<td>2002</td>
<td>20</td>
<td>130-150</td>
<td>100-130</td>
<td>140-160</td>
<td>7-14</td>
<td>4/10</td>
<td>1/10</td>
</tr>
<tr>
<td>2003</td>
<td>20</td>
<td>130-150</td>
<td>100-130</td>
<td>140-160</td>
<td>7-14</td>
<td>5/10</td>
<td>1/10</td>
</tr>
<tr>
<td>2004</td>
<td>20</td>
<td>130-150</td>
<td>100-130</td>
<td>140-160</td>
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<tr>
<td>2005</td>
<td>20</td>
<td>130-150</td>
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</tbody>
</table>

#### VASCULAR AND ENDOVASCULAR TECHNIQUES

Peter F. Lawrence, MD, Section Editor

Bitubular graft as an adjunct for laparoscopic hybrid repair of an abdominal aortic aneurysm

Raphael Coe-C, MD, Clement Capdehors, MD, Olivier Coeur-Britoimine, MD, PhD, and Marc Coe-C, MD, Société Française et Multinational, France.
Hybrid Graft

31 patients, AIOD
• ABF or endarterectomy

Results
• Conversion to minilaparotomy in 3 pts
• Mortality 3%
• Minor complications 9%

Medium term Kaplan Meyer Patency at median follow up of 36 months (range 12 to 68)

89% ± 0.5%
91% ± 0.5%
endovascular surgery

Open (laparoscopic) vascular surgery

- Amsterdam robotic program was suspended in 2010 because of lack of indications
WHAT’S ON THE HORIZON?

Nanobots

Nanotechnology

Nanobots

2018 Amsterdam Open Vascular Surgery Course

June 2019
Conclusions

• Endovascular surgery has won the battle with laparoscopic vascular surgery
• There is no place for “conventional” robotics in vascular surgery

THANK YOU!