Endo-SPONGE®

Endoluminal vacuum therapy
Minimally invasive method for the treatment of anastomotic leakage
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With the introduction of total mesorectal excision (TME) as the standard treatment for rectal carcinoma, the number of low anterior sphincter-preserving rectal resections has increased with a simultaneous decrease in exstirpations. The most important complication following anterior rectal resection is anastomotic leakage. Clinically manifest anastomotic leakage occurs in up to 15% of patients. Because of the immediate proximity of the sphincter to the anastomosis, there is a permanent tailback of infected secretion and gas into the intestinal lumen and into the pelvis. Once an anastomotic leakage has occurred, primary inflammation develops in the area of the anastomosis, localized in the minor pelvis. If the secretion continues to rise, generalized peritonitis can result, with severe septic progression involving multiple organ failure and potentially culminating in the death of the patient. Where there is local lower infection of pelvis with an endoscopically accessible cavity, the Endo-SPONGE® treatment can be applied.

Advantages of the Endo-SPONGE®:
- continuous drainage, no build up of secretion
- debridement, rapid cleaning of the wound cavity
- promotes granulation
- reduces mechanically the size of the wound cavity
- controls infection

Advantages for the patient:
- high level of acceptance
- high compliance
- no unpleasant odours
- outpatient treatment feasible in some cases

Treatment criteria:
- localized lower infection of the pelvis
- endoscopically accessible leakage
- sufficient drainage
- rapid clinical improvement of patient’s condition
Information from the literature on anastomotic leakage in the lower gastrointestinal tract*

<table>
<thead>
<tr>
<th>Author</th>
<th>Type of resection</th>
<th>Leakages</th>
<th>Rate of insufficiencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pickleman et al.</td>
<td>colon resection</td>
<td>21/1271</td>
<td>2 %</td>
</tr>
<tr>
<td>Köckerling et al.</td>
<td>colon resection</td>
<td>18/625</td>
<td>3 %</td>
</tr>
<tr>
<td>Read et al.</td>
<td>colon resection</td>
<td>4/316</td>
<td>1 %</td>
</tr>
<tr>
<td>Vignali et al.</td>
<td>low anterior rectum resection</td>
<td>29/1014</td>
<td>3 %</td>
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<tr>
<td>Rullier et al.</td>
<td>low anterior rectum resection</td>
<td>32/272</td>
<td>12 %</td>
</tr>
<tr>
<td>Willis et al. 2001</td>
<td>low anterior rectum resection</td>
<td>9/94</td>
<td>10 %</td>
</tr>
<tr>
<td>Schmid et al.</td>
<td>low anterior rectum resection</td>
<td>68/933</td>
<td>7 %</td>
</tr>
<tr>
<td>Eckman et al.</td>
<td>low anterior rectum resection</td>
<td>30/306</td>
<td>10 %</td>
</tr>
</tbody>
</table>

Low anterior rectum resection – leakage rate and height of anastomosis

<table>
<thead>
<tr>
<th>Height of anastomosis from the anocutaneous line</th>
<th>Patients [n]</th>
<th>Leakages [n]</th>
<th>Rate of insufficiencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 3 cm</td>
<td>46</td>
<td>6</td>
<td>13 %</td>
</tr>
<tr>
<td>3 – 5 cm</td>
<td>63</td>
<td>8</td>
<td>13 %</td>
</tr>
<tr>
<td>5 – 7 cm</td>
<td>38</td>
<td>5</td>
<td>13 %</td>
</tr>
<tr>
<td>7 – 16 cm</td>
<td>192</td>
<td>15</td>
<td>8 %</td>
</tr>
</tbody>
</table>

* Willis S, Stumpf M, Chirurg 2004, 75 · 1071 – 1078

Product range (Art. No.)

- **5526510**
  Box of 10 Endo-SPONGE® kits

- **5526520**
  Box of 5 Endo-SPONGE® kits

- **5526530**
  Single-kit

One Endo-SPONGE® kit consists of:
- Endo-SPONGE®
- Overtube in 2 different sizes
- Pusher
- Irrigation set
- Clamp
- Y-shaped connecting tube with Luer lock attachment to Redyrob® Trans Plus bottle

To be ordered separately:

- **5526604**
  Box of 10 Redyrob® Trans Plus
  (adjustable wound drainage system)

- **001419N**
  Box of 10 Askina® Gel

- **001419S**
  Box of 5 Askina® Gel
Endo-SPONGE®
Endoluminal vacuum therapy for the treatment of anastomotic leakage

Treatment procedure

1. Anastomosis
2. Anastomotic leakage with local infection in the minor pelvis
3. Diagnostic examination with a flexible endoscope
4. Endo-SPONGE® can be cut to the size of the wound cavity
5. Open-pored polyurethane sponge
6. Endoscope and overtube are inserted into the wound cavity
7. The Endo-SPONGE® is placed into position using the endoscope, overtube and pusher
8. The Endo-SPONGE® is released
9. Several Endo-SPONGES® can be used, depending on the size of the wound cavity
10. Connection to Redyrob® Trans Plus (adjustable wound drainage system)
11. Mode of action: the open pores of the sponge allow the suction to be transferred evenly over all tissue in contact with the sponge surface
12. Healing of the wound cavity

The Endo-SPONGE® system must be changed every 48 – 72 hours. There is a steady reduction in the size of the wound cavity.
The Endo-SPONGE® therapy

The open pores of the sponge allow the suction to be transferred evenly over all tissue in contact with the sponge surface. The cavity is drained by the endoscopically introduced Endo-SPONGE® system with Redyrob® Trans Plus.

For further information, please contact: info@endosponge.com
Advantages of the Redyrob® Trans Plus bottle:

- simple system handling
- patient mobility
- easy exchange
- closed system
- 600 ml filling volume
- quantitative vacuum display for easy reading of remaining vacuum capacity
The vacuum regulator offers 3 positions for regulating the suction:

- Level 1 = low vacuum
- Level 2 = medium vacuum
- Level 3 = high vacuum

Only low vacuum at level 1 has to be used in combination with Endo-SPONGE®.

The applied suction achieves continuous effective drainage and avoids a build up of secretion in the cavity.

The secretion is drained using the Redyrob® Trans Plus bottle. The drainage tube is routed via the anus and connected with the Redyrob® Trans Plus bottle using a Y-shaped connector. A maximum of 2 sponges can be connected to one bottle via a secure Luer Lock connection. Even drainage performance is guaranteed at all adjustment settings (until 95 % of total volume).

Drainage
Constant drainage performance (until 95 % of total volume) at all adjustment settings.

Quantitative vacuum display
High contrast scale gives precise information on the available vacuum capacity.

Vacuum regulator
Positions 1-2-3 for selecting low, medium or high vacuum drainage.