Endovascular aortic aneurysm repair has become first choice for elective interventions as well as becoming increasingly important in the treatment of ruptured aneurysms. However, limited information is available on the utilization of endovascular aortic prosthesis for the treatment of emergent and urgent early and late complications following open aortic surgery, or for patients with iatrogenic aortic lesions. This Poster presents 4 cases of urgent endovascular treatment of patients who experienced early or late complications following open aortic surgery or iatrogenic aortic lesions.

Methods:

Series of patients:

One patient with cardiac failure was treated due to a secondary aneurysm at the aortic bifurcation at the 34th post-operative day after open tube graft repair of an 10 cm large infrarenal aortic aneurysm in an outside hospital. Another patient was treated due to haemorrhagic shock following iatrogenic trauma of the posterior aortic wall at the height of the bifurcation during a spinal disc surgery procedure.

Results:

Implantation of the Nellix prosthesis was successful in all 4 patients. Postoperative control CT-Scan showed complete sealing and thus, successful repair of the respective aortic lesions. The implantation times for the prosthesis ranged between 87 and 139 minutes. One patient died due to pulmonary embolism on the intensive care unit on the 15th post-operative day. Three patients were discharged on day 7, 14 and 20 respectively. The currently available follow-up with a period up to 2 years does not show any abnormalities.

Discussion / Conclusion:

The results of this series correlate with the results available in the literature regarding endovascular repair of ruptured aortic aneurysms. Even though the implantation of the Nellix prosthesis in the reported cases were performed outside the approved IFU, polymer sealing appears to be an interesting alternative to surgical treatment in a urgent or emergency setting due to complications following open aortic surgery or iatrogenic aortic lesions.

Comparison with data in literature:

<table>
<thead>
<tr>
<th>Author</th>
<th>Center</th>
<th>Period</th>
<th>Number of patients</th>
<th>Age [years]</th>
<th>Hardman Index</th>
<th>rAAA / Rupture pOR</th>
<th>Symptomatic AAA / pOR</th>
<th>Technical success</th>
<th>Operation time [min.]</th>
<th>Stay ICU [days]</th>
<th>Stay in hospital [days]</th>
<th>30-day-mortality</th>
<th>Reinterventions</th>
<th>Endoleak</th>
<th>Insufficient sealing</th>
<th>Stent-graft occlusion</th>
<th>Follow up [months]</th>
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</thead>
<tbody>
<tr>
<td>de Bruin</td>
<td>Single</td>
<td>2013 – 2014</td>
<td>5 (3m, 2w)</td>
<td>71 (57 – 90)</td>
<td>2 (0 – 3)</td>
<td>5 / 5</td>
<td>0 / 5</td>
<td>5 / 5 (100%)</td>
<td>65 – 90</td>
<td>3 (0 – 6)</td>
<td>8 (0 – 40)</td>
<td>2 / 5 (40%)</td>
<td>0 % **</td>
<td>0 % **</td>
<td>0 %</td>
<td>9.2</td>
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</tr>
<tr>
<td>Reijnem</td>
<td>Single</td>
<td>2013-2015</td>
<td>58 (46m, 12w)</td>
<td>74 (65 – 83)</td>
<td>Not specified</td>
<td>28 / 58</td>
<td>30 / 58</td>
<td>56 / 58 (96%)</td>
<td>98 ± 39</td>
<td>2.2 ± 6.6</td>
<td>9.7 ± 11.4</td>
<td>11 / 58 (19%)</td>
<td>0 % **</td>
<td>0 %</td>
<td>0 %</td>
<td>15.0 ± 3.4 AAA</td>
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</tr>
</tbody>
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References: