Acute and follow-up results of complete aortoiliac obstructions (Leriche syndrome) – The Leipzig experience

Madeleine Luther
A. Schmidt, S. Steiner, Y. Bausback, D. Branzan$^2$, H. Staab$^2$, U. Banning-Eichenseer, S. Scheinert, D. Scheinert

Division of Angiology, $^2$Division of Vascular Surgery, University-Hospital Leipzig, Germany
Disclosure

Speaker name: Madeleine Luther

I do not have any potential conflict of interest.
Study design

• Retrospective cohort study of patients with Leriche syndrome undergoing endovascular reconstruction of the aortoiliac system using covered stents

• 12/2007 – 12/2017
• 53 patients treated, 3 lost to follow-up (5.7%)
• Mean follow-up time: 38.3 months
  (range 0-132 months)
### Patient demographics

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years), mean</td>
<td>60.0</td>
</tr>
<tr>
<td>(range 31-89)</td>
<td></td>
</tr>
<tr>
<td>Female, %</td>
<td>41.5</td>
</tr>
<tr>
<td>Arterial Hypertension, %</td>
<td>73.6</td>
</tr>
<tr>
<td>Hyperlipidemia, %</td>
<td>56.6</td>
</tr>
<tr>
<td>Diabetes, %</td>
<td>22.6</td>
</tr>
<tr>
<td>Current/former smoking, %</td>
<td>73.6</td>
</tr>
<tr>
<td>Coronary heart disease, %</td>
<td>28.3</td>
</tr>
<tr>
<td>Renal insufficiency, %</td>
<td>24.5</td>
</tr>
<tr>
<td>Cerebrovascular disease, %</td>
<td>11.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ASA Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASA 3</td>
<td>62%</td>
</tr>
<tr>
<td>ASA 4</td>
<td>27%</td>
</tr>
<tr>
<td>ASA 5</td>
<td>11%</td>
</tr>
</tbody>
</table>

18.9% acute onset  
81.1% chronic course
Case example

- Male
- 57 years old
- Acute Leriche syndrome with occlusion of:
  - Infrarenal aorta
  - Common iliac arteries
  - Right external iliac artery
- ASA 4
- Rutherford 4
Case example

Bilateral transbrachial crossing
Case example

Reconstruction with two Viabahn grafts and an balloon-expandable Chimney stent-graft into the left renal artery
Case example

Reconstruction of the hypogastric artery origin with a balloon-expandable stentgraft.
Technical success

• 51/53 (96.2%)
  – 2 cases with need for second dilatation of the stentgraft

• Median length of intervention: 66.0 minutes
• Median length of hospital stay: 4 days
Peri-interventional complications

- **7/53 (13.2%)**

- Access site complications 6/7
  - Perforation 2
  - Local bleeding / retroperitoneal hematoma requiring transfusion 1
  - AV fistula not requiring intervention 1
  - Pseudoaneurysm requiring intervention 1
  - Compartment syndrome requiring fasciotomy 1

- Systemic complications 1/7
  - Cardiac decompensation resolved with diuretics 1
Follow-up - Death

- 17/53 (32.1%)

- 30 day mortality 6/53 (11.3%) mean 9.3d
  - In hospital 4
    - Technical failure 1 (1.9%)
    - Multimorbidity 3
  - After discharge 2

- >30 day mortality 11/53 (20.8%) mean 26.7m
Follow-up - Death

Kaplan-Meier survival curve

- Leriche syndrome
- Acute Leriche syndrome
- Leriche syndrome censored
- Acute Leriche syndrome censored

Survival probability

Time after intervention (months)
Follow-up – Primary patency rate

- **Rate of re-occlusion**
  - Reintervention: 9
  - Surgery: 2

- **Primary patency**
  - After 6 months: 87.0% (40/46)
  - After 12 months: 82.6% (38/46)
  - After 24 months: 78.3% (36/46)
Follow-up – Patency rate
Clinical success
mean Rutherford levels

before the intervention

end of observation
Conclusions

**Pros**
- Minimal invasive
- Shorter length of stay in hospital
- Good short- and mid-term results
- **Lower peri-interventional morbidity and mortality**

**Cons**
- Long-term patency?
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